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Journal



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Managing Editor CHARLES S. SLOCOMBE

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Extracts from the Economic Brief
which Aided N. Y. State in Winning
its Case, on the Constitutionality of
the N. Y. State Job Insurance Act.

Industrial Instability *and* Unemployment Insurance

Condensed from selected parts of Brief
prepared under direction of

MEREDITH B. GIVENS

Director of Placement and Research and Statistics
N. Y. State Department of Labor

THE demand for and the supply
of labor never coincide exactly.

A pool of labor power lies idle
at all times, prosperous or otherwise,
although its size and composition are
continually changing. Our working
population drifts into and out of this
pool in response to the multifarious
and fluctuating demands of business.
An analysis of the nature of unem-
ployment is found in the study of the
Economics of Overhead Costs by Pro-
fessor J. M. Clark of Columbia
University. He says:

"One fact needs to be faced which
is too often slighted, both by business
men and economic theorists, namely,
the fact that mobilization (of indus-
try's labor force) itself implies and
requires some unemployment. It

calls for an 'industrial reserve army',
both of capital and of labor, though
not to the extent nor for the reasons
which the Marxian theory supposes.
To the extent that this is really in-
evitable and essential to industry, it
is not a waste, though the question
will remain how to reduce the loss of
power to the smallest possible pro-
portions . . . and who should bear
the burden of the irreducible re-
mainder" (pp. 366-7).

THE JOBLESS

The volume of unemployment in
the United States has not been mea-
sured directly except at certain
specific dates covered by census enu-
merations. Studies have been made
by competent statisticians, however,

whose results indicate broadly the approximate trends in unemployment. The estimates err on the conservative

each year. Actual unemployment exceeds the estimates, for the jobless in the industries for which data are

CHART 2
UNEMPLOYMENT IN THE UNITED STATES, 1897-1933

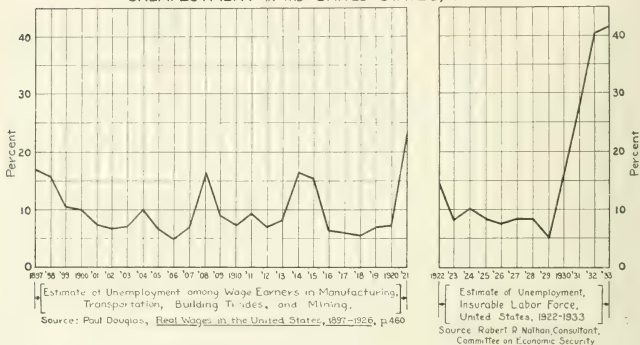


TABLE 1
ESTIMATED UNEMPLOYMENT, INSURABLE LABOR FORCE
UNITED STATES, 1922-1933

Year	Insurable Labor Force		
	Number	Number Unemployed	Percentage Unemployed
1922	18,789,145	2,733,856	14.55
1923	19,225,240	1,579,246	8.21
1924	19,661,335	1,975,798	10.05
1925	20,097,430	1,680,058	8.37
1926	20,533,525	1,571,336	7.65
1927	20,969,620	1,694,333	8.08
1928	21,405,715	1,776,641	8.30
1929	21,841,810	1,181,748	5.41
1930	22,277,905	3,534,445	15.84
1931	22,714,000	6,328,421	27.86
1932	23,150,096	9,326,532	40.46
1933	23,586,190	9,803,582	41.56

Source: *Report*, Committee on Economic Security.

side; that is, they indicate that at least the estimated number were unemployed, on the average, during

scanty or missing are estimated at a minimum. Also, the peak unemployment within any given year is obviously in excess of the average. Further, there is continually a turnover of both the employed and the unemployed; that is, the identity of the unemployed continually shifts and over a period many more are unemployed than the statistical averages indicate. Finally, the part-time workers or under-employed are not represented at all in these estimates.

With these qualifications, unemployment estimates, charts and tables can be interpreted properly as measures of minimum unemployment. Chart 2, based on estimates by Professor Paul H. Douglas of the Uni-

versity of Chicago, and by the Committee on Economic Security, shows percentages of unemployment in the United States since 1897.

The estimated percentage of unemployment among the insurable labor force in the United States is shown in Table 1.

TIME IS LOST BETWEEN JOBS

At all times most of the jobless are among the short-term unemployed.

The shifting identity of the unemployed has been pointed out and the uneven duration of their enforced idleness has been shown above. The lag between layoff and reemployment has been explored in several important studies. In a survey for The Brookings Institution, conducted among a representative group of workers laid off in various industries, Dr. Lubin (now United States Commissioner of Labor Statistics) reports, among other findings, that

"(1) The dispossessed workers did not easily find new employment. Forty-five per cent of those interviewed had not found employment when seen (from one to twelve months after separation from employment).

"(2) Even those workers who secured new employment had difficulty in finding jobs. Only 11.5 per cent were idle for less than one month and more than one-half had been idle for more than three months before being re-absorbed by industry.

"(3) Workers discharged from industry (moved) in large numbers to plants which produce products differ-

ent from those made in the industries with which they were formerly associated. Less than 10 per cent of those surveyed were reemployed at their old jobs. Two-thirds went into entirely different industries."

Other studies support these findings. For example, displaced rubber workers in New Haven, of whom 30 per cent were unemployed ten months after layoff, found reemployment with difficulty. Further, "the total losses . . . were not fully measured by the amount of unemployment. The vast majority . . . suffered sharp cuts in earnings as a result of the change in jobs. . . . The figures show that the total loss in income of the workers in a period of about one year after the shutdown amounted to about 50 per cent of their income during the preceding year. . . ." Similar conclusions from other investigations could be cited.

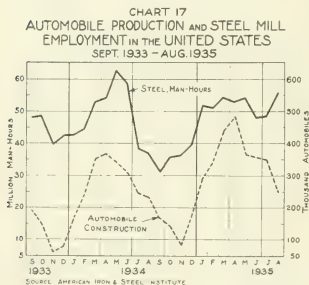
INDUSTRIES ARE INTERDEPENDENT

Unemployment is a consequence of instability in industry and trade, and as such, is a problem of the business community as a whole. Its principal causes may be distinguished, but they cannot be dissociated from one another, nor can they be weighted with precision, either at a given time or over a period. They are numerous and complex, shifting and largely unpredictable. Individual firms are relatively powerless to cope with them, and only to a minor and uncertain extent can they be dealt with by individual industries. They are

associated with the economic interdependence of all industries, geographic areas and social groups.

The individual business concern operates in the midst of a maze of forces beyond its immediate influence.

The controlling influence of the level of activity in one industry over that of another is illustrated by the close correlation between man hours worked in the steel industry and the production of automobiles, as shown in Chart below.



This illustration could be repeated *ad infinitum* if a comprehensive effort were made to give concrete evidence of the interdependence of industry and the instabilities which arise from the high degree of specialization in industry today. If whole industries are dependent on the activity of others, then how much more is the individual firm caught in a maelstrom of forces to which it must adapt but which, alone, it cannot control.

REGULARIZATION LIMITED

It is commonly assumed that a large number of workers are protected by plans for the regularization of employment. A few individual firms have accomplished something in the face of very difficult problems, yet the *swings of seasonal unemployment have increased* in their impact on workers during the last fifteen years.

For nineteen important industries employing over two million persons, a recent study has shown that the number of workers attached to industries showing increased amplitude of seasonal swings is three times the number of those engaged in industries showing decreased swings. This would indicate that, despite the gains made by a few employers in regularizing employment in their own plants, they have not been able to exercise any substantial influence on seasonal unemployment as a whole.

Effort by management to regularize employment is conditioned by the nature of the business and other circumstances largely beyond its control. The General Electric Company, for example, can forecast the annual production of electric light bulbs with a high degree of accuracy, and regular production can be scheduled accordingly. In the manufacture of turbines, however, the company must wait on specifications and make up each turbine on order; hence, employment fluctuates with the number and volume of orders.

A degree of stabilization in one

industry may even accentuate irregularity in another. The manufacture of radios affords an example. Until recently orders for house radios were concentrated in the autumn, which caused highly irregular employment in the industry. With the adaptation of the radio to the automobile, employment in the industry became more regular because orders for automobile radios were concentrated in the first few months of the year. Recently, however, the automobile industry has been trying with some success to spread its own employment more evenly over the year. Already radio manufacturers are realizing that with more stable production of cars, a new factor of instability obstructs their own attempts to stabilize.

During an investigation of regularization plans in New York in 1930, only 292 firms reported any effort to stabilize employment. Of this number, 117 had not made any effort in this direction other than the use of a part-time or stagger system of employment in place of layoffs in the dull season. Less than 100,000 workers were employed by firms which had adopted methods other than part-time work as a means of regularizing employment. Such efforts included the stimulation of consumer and dealer demand in dull seasons, the diversification or standardization of the product, the budgeting of sales and production, manufacture for stock and the dovetailing of jobs. About 2 per cent of the wage earners in the State were employed in establishments that were

making a definite effort to regularize. Even these firms did not succeed in eliminating seasonal unemployment.

THOUSANDS SEASONALLY IDLE

While much may yet be done to lessen seasonal unemployment, progress in this direction has not been rapid. With the incentive of reduced overhead charges as a spur to continued efforts, it may be expected that plant managers and owners will be able to reduce the burden of seasonal unemployment here and there in the future. That all such unemployment, or even a large part of it, will not be eliminated by regularization plans is a foregone conclusion. Plans in any one industry or plant are subject to the vicissitudes of change in the general economic system and, not infrequently, a plan successful in eliminating seasonal variation during a short period may be interfered with and even rendered ineffective by changes in other industries, or in the general economic scene.

In the United States more than a million men and women, on the average, are unemployed every month owing to seasonal slackness. Workers in the State of New York suffer particularly because of the importance of the construction and garment industries. The average number of persons seasonally out of work in New York State, excluding agriculture, domestic service and public service, is not less than 150,000.

Unemployment resulting from the inevitable swings of business through wide arcs of boom and depression is

even less susceptible to prevision and provision than that attributable to seasonal fluctuations.

Underlying the seasonal and cyclical fluctuations there are other factors, such as population, technological and market changes, geographical shifts in industries, and the alternating rise and disappearance of firms and sometimes whole industries, that create hazards never absent but always unpredictable in their appearance and incidence.

MACHINES DISPLACE LABOR

Technological changes cause unemployment because, certainly for short periods, industry finds it more profitable to pay for machines than for human labor. This is not to imply that in the *long run* the number of job-seekers will exceed the number of jobs; but leading considerations suggest that technological unemployment, in the above sense, cannot be shrugged off as merely another economic fallacy.

A dramatic illustration of technological displacement is found in the iron and steel industry. Since the early days in Wales steel sheets have been produced by a highly athletic process whereby the workers passed the sheet bar to and fro between power-driven rolls until the desired gauge or thickness was obtained. In 1927 a remarkable process of continuous stripsheet rolling was introduced by which the finished sheets are produced without reheating, direct from the ingot. In the United

States in 1929 there were roughly 1400 of the old mills in the sheet and tin plate industry, with an aggregate annual capacity of 7,500,000 gross tons of sheet. One of the new continuous mills has a yearly capacity of approximately 400,000 gross tons of uniform gauge, equivalent to the capacity of forty or fifty old style sheet or tin mills. The "hot mills" are now almost obsolete, as are the puddling furnace, the bloomery and the forge. The work which formerly required more than 10,000 workers, directly and indirectly, can now be done by a mere handful.

Whatever may happen "in the long run," this type of displacement leaves a serious problem for the dislocated workers and makes a large contribution to total unemployment. The results of a careful statistical study show that, owing to improvement in technological and managerial efficiency, over three million wage earners were displaced in the United States, between 1920 and 1931, an annual average of about a quarter of a million wage earners. The reabsorption of these workers "took one and one-half years or thereabout, to work itself out . . ." and the average time lost per displaced worker was approximately three quarters of a year.

PLANTS MIGRATE

Another cause of employment dislocation and readjustment is the migration of plants and even entire industries. This may be induced by

depletion of local sources of raw materials, by shifts of population, by changing demand, or by the desire for new layout and equipment in an environment free of the old traditions. The immediate cause of relocation is usually the desire or the necessity for lower unit costs. Often the tragic result is a stranded community, or stranded groups within a community.

The case of the International Paper Company illustrates the way in which technical considerations may require an industry to move its plants, with serious effect on local employment. This company had plants for manufacturing paper from timber at Fort Ticonderoga, Katyville and Pierceville, New York. In 1931 the timber in this region became exhausted. New and modern plants were erected in the South, and although the company made some effort to aid in the reemployment of their workers, it did not assume complete responsibility for the unemployment it had created. Other instances of removal or abandonment of plants are cited.

Similar in effect is the importation of workers. The Bethlehem Steel Corporation at Lackawanna, New York, imported workers and later abandoned them to public relief in a community totally unprepared for the burden. In all such instances, displacement may or may not be matched by immediate or ultimate reabsorption or expansion in other lines of employment.

BUSINESSES FAIL

The instability of business is mirrored in the statistics of business failures. Such failures often mean the disappearance of firms and the direct displacement of workers. Of course direct displacement does not follow necessarily when insolvent enterprises are at once relaunched under new auspices, but the stringencies that are climaxed in business failures none the less press continuously upon business and employment, either directly or indirectly. Furthermore, business failures themselves present an incomplete picture, for most concerns in financial difficulty anticipate bankruptcy by voluntarily going out of business and thus avoid the stigma of forced liquidation. "For every business enterprise which fails," says Roy A. Foulke of Dun and Bradstreet, "the managements of a far greater number close up shop, lock the windows, turn out the lights, pay the rent, liquidate their bills, and then voluntarily move on to try their fortune at some other location, or to become employees until they can husband sufficient resources to become entrepreneurs once again."

In their effect on employment these continual shifts in enterprise, the disappearance of old firms and the rise of new, are closely related to the other fundamental changes and shifts in the business structure that have been described above.

These correlative processes of in-

dustrial change, when simultaneous, may tend to cancel one another in the long run when all industries are lumped together. But this cannot be true of individual industries or persons.

PRIVATE PLANS TOO FRAGILE

Company interest in the protection of employees against unemployment is a post-War development. But in 1931 the number of workers covered by private plans of unemployment compensation constituted less than one-half of one per cent of these gainfully employed in the country. Two-thirds of this small number were covered by trade union unemployment insurance schemes, or by joint compensation plans provided by employers and trade unions. The remaining one-third were covered by plans established and operated by plant management.

By 1933 thirty-eight companies had initiated voluntary unemployment compensation plans—nineteen in number—to care for unemployed members of their work force. An analysis of experience with these plans gives some indication of probable shortcomings on the part of the employer reserve type of unemployment insurance. It is important to note that in every respect these nineteen plans operated under advantages that the average firm does not enjoy. Because the plans were voluntary, each originated at a time when the company was well able to finance payments. Many companies enjoyed

a monopoly or controlled a large percentage of the competitive business for some time. Before plans were put into effect, several concerns had successfully stabilized employment and reduced benefit costs. Other companies achieved improved stability during the operation of the plans. The usual limitation of benefits to employees temporarily laid off further reduced payments under the voluntary plans.

Despite the elements favoring the company plans, 7 of the 19 were discontinued and in 7 others it was found necessary to reduce benefits or limit their duration. Their experience may be briefly summarized as follows:

The Rockland Finishing Company plan functioned from 1920 to 1923, when the money set aside for its operation was exhausted.

The American Cast Iron Pipe Company initiated a plan in 1924. Technological changes made it desirable to abandon the plan in 1926.

The United Diamond Works inaugurated a plan in 1921 and maintained payments through one entire year of the 1920-22 depression but the decline in the diamond business that began in 1928 forced the plant to close in 1931.

The Brown and Bailey Company had a plan from 1927 through 1931. Although reserves were built up they did not prove sufficient to meet the continued unemployment of the depression.

The Dennison Manufacturing Com-

pany operated a plan from 1916 to October 1932, when it was suspended for lack of funds.

The Leeds and Northrup Company started a plan in 1923. Benefits were reduced in 1931 but continued unemployment consumed the reserves that had been set aside and the plan terminated in June 1932.

The Consolidated Water Power and Paper Company had a plan for the year 1929; it was given up for non-financial reasons.

The Crocker-McElwain Company, which for ten years guaranteed fifty-two weeks' full pay, in 1931 reduced its guarantee to 80 per cent, and in 1932 to 50 per cent of wages for forty-four weeks.

The Columbia Conserve Company although maintaining their fifty-two week guarantee, voted in 1932 to pass the payroll in any week in which funds failed to meet the payroll and other obligations.

Proctor and Gamble, which guaranteed forty-eight weeks' employment, reduced working hours in 1932 to 75 per cent of the normal fifty hours. Later that year the five-day week was adopted, bringing weekly hours to forty-five, and in January 1933 adoption of an eight-hour day established a forty-hour week.

The General Electric Company's contributory plan originally proposed to pay 50 per cent of wages up to a weekly maximum of \$20; instead a \$15 limit was adopted.

Three firms in Fond du Lac, Wisconsin, operating a single plan, have

in effect cut benefits by reducing hours of work.

The John A. Manning Company originally paid flat benefits and altered their plan to provide at least 3½ days' pay each week.

Rochester Plan. In 1931, 14 companies united in adopting a plan to build up case reserves for benefits to their employees during periods of unemployment. Some time later five additional companies subscribed to the plan. Eleven companies failed to set up reserves or were unable to continue payments and paid no benefits.

"Neither union, joint nor company plans, did more up to 1932 than prove the necessity for state or federal legislation on the subject," according to a recent and definitive review of working conditions and labor legislation in the United States. It is clearly indicated that private unemployment compensation plans are too fragile to survive.

NEED FOR COMPREHENSIVE PLAN

If individual effort is impotent to deal with the growing problem of unemployment, and if existing community methods are inadequate, as has been shown, then some new device for coping with the problem is imperative.

The *causes* of unemployment are multiple and variable in their impact from time to time, from firm to firm and from industry to industry. They are so inherent in our economic structure that they cannot be attributed,

even at a given time, to a specific employer or industry. Their *effects* are so persistent that they are felt in good times as well as bad; they bring difficulties in depressions, even to the so-called stable trades. Thus unemployment is so unpredictable and so unevenly distributed that it cannot be provided for from the relatively small resources of a single employer or industry.

The multiple and continually shifting manifestations of unemployment must be dealt with as a whole, and call for a concerted approach by industry. Through a pooled fund available to meet the difficulties brought about by unemployment wherever it arises the employees of individual industries and firms can most effectively be assured of the protection needed, and the benefits of sustained consumption extended to the community at large.

NO ADDITIONAL COST

Thus, the cost of maintaining our idle labor reserves would be widely distributed. This criterion can be satisfied by a payroll tax which falls usually on wage earners or consumers or both.

It should not be assumed that the cost of providing unemployment insurance is in any sense an additional cost imposed on industry or on the purchasers of industry's product, beyond that to which they are subject by the mere existence of unemployment, apart from any scheme of insurance. Under all conceivable conditions, unemployment is a liability and a cost. By means of a reasonable tax on payrolls for unemployment insurance, as provided under the present law, direct and indirect costs should be substantially reduced.

Gunfire Makes 120 Decibels of Noise, an Auto Horn Scares You with 90 Db., You Have 40 Db. at Home, and Your Heart Beats to a Tune of 10 Db.

Sound Control and Noise Elimination

By WALTER J. HODGE
Acoustical Engineer
Johns-Manville Corp., N. Y.

WE LIVE in a world of sound; yet, in spite of its vital importance to every day existence, sound rarely enters into our conscious thinking. We depend on it for communication by speech, for entertainment, danger signals;—as an aid to navigation through air and on sea. In the average person's existence there is never a moment, day or night, when his ears are not recording sounds of one kind or another. But because so little is commonly known of the subject, the air is filled with sound that is not only a constant inconvenience, but which works positive harm to all who must suffer its attacks.

It is here the intention to sketch briefly some of the basic principles of sound control, and to show how a

knowledge of these principles are applied to problems in everyday life.

VIBRATIONS CAUSE SOUND WAVES

Wherever and whenever a vibration occurs, be it in the string of a piano or violin, a column of air in an organ pipe, or the diaphragm in a telephone ear piece, the stage is set for the creation of sound waves. Any vibrating object, in its motion, pushes to and fro on the air particles surrounding it on all sides; these air particles in turn disturb their more remote neighbors. By this interaction of the air particles, the original vibration spreads out in the form of a bubble of ever increasing size, and if the creative vibration persists, this bubble is followed by similar bubbles, regularly spaced and moving hard on the

heels of the first. As the bubbles grow very large their walls will become so very thin they will finally melt into nothingness. So it is with the air vibrations which ultimately are spread over such vast areas as they move out and away from their source that the reduced vibrations of the air particles become lost in the random motions of the air in general.

If by chance a human ear should be in the path of any of these swiftly

pitch." The measured distance between "bubbles" is known as the "wave length" of the sound considered.

However, the kinds of sound just discussed occur very rarely as natural phenomena. The sound waves set up by a whistle, an organ pipe or the voice of a friend, are never a simple set of vibrations such as we have just considered. Rather are they a composite of many simultaneously-gen-

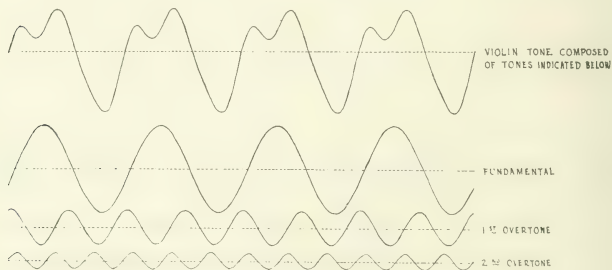


FIG. 1

expanding bubbles of air pressure, its infinitely delicate mechanism would telegraph to the brain the time of arrival and the intensity of each arriving pressure as it came, and the owner of the ear would derive from this an impression of the pitch and loudness of the sound. These pressure "bubbles" all expand outward at the same rate of approximately 1,100 feet per second,—called by us the "speed of sound." If they arrive at the ear with great frequency, we say the resultant sound has a "high

pitch." What we know as the "pitch" of such a sound is determined by the pitch of the lowest frequency vibration present. The other vibrations which accompany this lowest frequency or "fundamental" vibration are known as "overtones," or "harmonics."

It is because the human ear is without equal in detecting and analyzing these overtones in sounds that we are so keenly aware of the differences in human voices; that we differentiate between various musical

instruments even to the extent of preferring a particular violin to another seemingly identical. Such a composite wave as we have here discussed is shown, with the components going to make it up, in Figure 1. If the vibrations drawn here in graph form were set up in the air, the ear would pronounce the resultant sound to be that of a violin. Conversely, apparatus is available to draw such a record as this from sound existing in the air, and if a violin tone were to be so recorded, the complex waves of Figure 1 would result.

It is thus evident that any musical tone, that is, any sound of definite pitch, is the resultant of one or more simple and uniform vibrations, and that the amplitudes (or intensities) and frequencies of these vibrations determine the sound intensity and quality of the resulting complex vibration. While the ear is without an equal in judging the quality of sound, it is not an accurate judge of frequency or intensity per se. Intensity largely determines sound loudness, and to provide an accurate measurement of this characteristic, an electrical apparatus known as a sound or Acoustimeter is usually employed. Indeed, a sound meter is to acoustics what a thermometer is to heat.

Up to this point we have been discussing sound entirely from the viewpoint of the scientist. But in this modern world, sound forces its way into everyone's consciousness. Nearly every out-standing invention of modern times has left a wake of new

noises,—the radio, automobile, steam engine, trolley-car, electric refrigerator, typewriter, sewing machine, printing press,—the list is endless. About the only really noiseless invention of modern times is the electric light. There are also inventions specifically intended to make noise—automobile horns, sirens, door-bells—down to alarm clocks.

NOISE IS UNDESIRED SOUND

Noise is most aptly defined as "undesired sound." At one time all sounds not pleasing were termed noises, but this definition is open to exception. Even the cadence of a Wayne King waltz can be noise if it emanates from a neighbor's radio at three o'clock in the morning. Likewise, the sound of rushing water would not be called noise by a thirsty individual to whom it promised a drink.

Thus noise in its countless aspects is continually raising problems. For example: How can employers capitalize on the benefits of modern office machinery without compelling their employees to work under conditions of distressing noise? Again, how can residence interiors be protected from exterior street noises and from the various miscellaneous sounds that domestic equipment generates?

RIVETING MACHINE, 90 DECIBELS

In an effort to compare and classify noises, a special measuring technique has been developed, built around that unit with the strange name—the Decibel. A one decibel change in



FIG. 4. A TEST FOR SOUND ABSORPTION IN THE ACOUSTICAL ENGINEERING LABORATORY
Courtesy Johns Manville Corp.

sound intensity corresponds roughly to the slightest change in loudness that can be distinguished by the human ear.

If we wish to describe the hotness or coldness of our surroundings, we say "The temperature is 80 degrees," or "The thermometer reads 20 degrees out-of-doors," and other persons know from their own experience what we mean. When the decibel scale becomes more widely known and understood, it will be as informative as the temperature scale is when we say "The noise level is 80 decibels," or "20 decibels," as the case may be.

Briefly reviewing the history of the decibel, we find it is one tenth part of a Bel, this latter unit being named by the telephone engineers after Alexander Graham Bell, and signifying in telephony a certain increase or diminishment in sound or electrical intensity. Essentially, it represents a ratio between two quantities; in sound it is used to indicate the ratio of energy existing between any given sound and the faintest sound that the ear can hear. It thus stands to sound in somewhat the same relationship that degrees Fahrenheit stand to heat, where, for example, we would denote the amount of physical discomfort to be experienced in a certain room by the number of "degrees Fahrenheit" existing between the temperature of that room and another reference room in which one could remain with absolute comfort.

Suppose 70 degrees represented this comfortable temperature, then another room of 100 degrees would

certainly be classed as uncomfortable, and 30 degrees would signify the extent to which it was so. Assume the temperature is now reduced from 100 degrees to 90 degrees. It is only a 10 degree reduction, but it goes without saying that this represents a tremendous increase in comfort. Just so does it work out in the case of sound. A 50 db. level is that of a quiet office; 60 db. that of a noisy office. If the 60 db. level be reduced to 50 db. the actual reduction is only 10 db., but the increase in physical comfort and well-being is enormous.

As you walk down a city street and pass by a riveting machine at work, you are conscious of a terrific din. If the machine suddenly stops, the surroundings seem by contrast almost quiet. Yet here the actual sound level has been reduced only about 10 db., from approximately 90 db. to 80 db.

Sound-absorbing materials of high efficiency, properly installed, are very frequently capable of quieting noisy rooms and offices by an easily calculable amount, usually as much as 10 db.

HOW NOISE IS MEASURED

<i>Energy units</i>	<i>Decibels</i>	
10,000,000,000,000	130	Threshold of painful sound
1,000,000,000,000	120	Artillery gunfire
100,000,000,000	110	In airplane cabin
10,000,000,000	100	In subway car
1,000,000,000	90	Average auto horn
100,000,000	80	Tabulating machine room
10,000,000	70	Average stenographic room
1,000,000	60	Average general office
100,000	50	Average quiet office
10,000	40	Average residence
1,000	30	Quiet farmhouse
100	20	Underground vault
10	10	One's own heartbeat
1	0	Absolute stillness

Schopenhauer, the famous German Philosopher, once observed "Noise is the true murderer of thought." Herbert Spencer, the great thinker, often said that "You might gauge a man's intellectual capacity by the degree of his intolerance of unnecessary noise." Made many years ago, these statements find daily confirmation in modern life. Unfortunate indeed would be the situation of those required to perform mentally with speed and accuracy if there was no possible relief from the modern bedlam in which they are so frequently compelled to work. Today, in at least a partial counter-attack on noise, sound-absorbing materials are available that are capable of blotting out as much as 85% of the sound striking them. The materials are rated according to their effectiveness in this performance.

ECHOES

What do these sound or noise controlling materials do? Figure 2 is a picture of sound waves in an auditorium, reflected from the walls and ceiling surfaces, so that they focussed in the center rear, at which point there was an echo. Comparatively quiet spots, with few sound waves exist on either side of the echo point.

In dealing with an auditorium the acoustical engineer's job is, not necessarily to reduce sound, but to avoid echoes and silent spots and distribute sound evenly throughout the theatre. The photo on the right Figure 3 shows the sound condition after corrective measures were applied.

Sound control materials particularly those for reducing noise, absorb the sound waves so that they do not continue to rebound from wall to wall and floor and ceiling in a chaos of echoes and reverberations.

REVERBERATIONS

Reverberation is really a multitude of echoes so closely spaced as to defy segregation, and whose net effect is to blur speech and music into a chaos of noise. The effects of reverberation can be experienced out-of-doors, as when a rifle is fired in a mountain ravine. The sound reverberates noticeably for a few seconds, due to reflections to-and-fro from the walls of the ravine. Finally, it either escapes from the ravine or is absorbed by the bushes, trees, etc., of the surroundings. This effect of reverberation is present in the canyon-like streets of our large cities and contributes to the high noise levels existing there. In completely enclosed spaces, such as rooms, there is usually no exit the sound can take, so it continues to rebound from wall to wall to ceiling.

A noisy room in the quiet country may be made quieter by opening the window, so that the pressure of sound waves passes out, instead of being bottled up and bouncing around inside.

But in cities noise cannot be reduced in this manner, for though noise would pass out from the room, perhaps as much other noise would enter from the street.

But the ceiling or walls of city

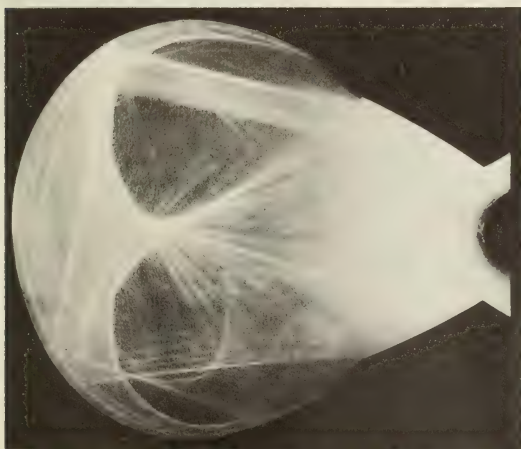


FIG. 2. PICTURE OF AN ECHO

Sound waves reflected from the walls of an auditorium come to a focus at rear center causing an echo, with silent spots on each side.

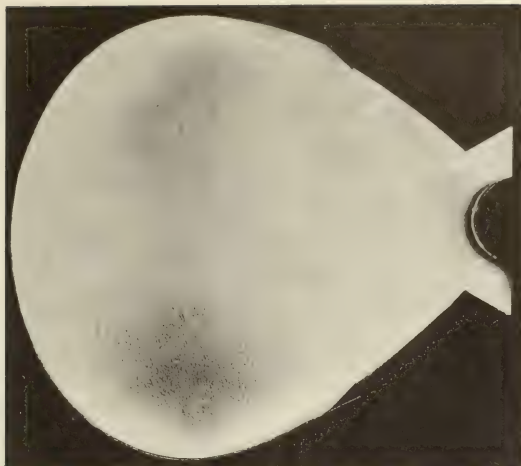


FIG. 3. SOUND CONTROLLED

Sound evenly distributed after studies and application of corrective measures

rooms may be covered, wholly or partially, with tiles with many small perforations in them. The sound escapes through these holes and goes into specially prepared absorbent material where it quickly dies.

It is possible and economical today to decoratively apply highly efficient sound-absorbing materials to the wall and ceiling surface of a noisy room with such effect that noise reduction of 5 to 15 db., depending on conditions, can be attained. Such materials convert almost as much sound energy into heat as an open window of equivalent area would permit to escape. Properly selected, such sound-absorbent materials are highly light-reflecting, fireproof, salvageable in tenant change and easily maintained, both aesthetically and hygienically.

When it is required to isolate a noisy space from a quiet one (e.g. a noisy general office from a quiet private office) highly efficient sound isolation constructions are already available, and proven by use. When vibrating machinery offends, vibration isolation will be found to be economical, practical and highly successful in result.

QUIET SAVES ENERGY

The harm which noise does to the human mechanism is by no means a

matter of guesswork. The Department of Psychology at a large Eastern University showed in a convincing experiment that typists used 19% more energy working under noisy conditions and lost more than 40% in speed. And here is something interesting from the common view point of all businesses;—efficiency and economy:—An installation of quieting treatment in a telephone room of the Western Union Company reduced the number of errors made in handling messages 42%;—a net saving of 3% in the cost of each message resulted. In another installation in the book-keeping department of a large department store, a reduction in errors of 24½% was effected.

In the Research Laboratory of our Company at Manville, N. J. have been discovered principles of new and revealing importance regarding sound. We know its cause and effects; its results when suppressed and when out of control. Great resources and engineering ability are now at hand to provide quiet for all who realize the need for it, and will demand it. When the benefits of sound *controlled*—are realized, then, noise, the greatest scourge of modern times, will be doomed.

Practically All Countries with Social Insurance Plans Have Permanently Adopted This System, After Other Systems Have Been Unsuccessfully Tried.

The Insurance Stamp Pass Book System

By W. F. BERNART, JR.

Tax Research Division

Pitney-Bowes Postage Meter Co., Stamford, Conn.

SOCIAL insurance must be popularized as insurance, and not as a paternalistic Government "hand-out," and it must have efficient administration.

A simple insurance card or pass-book, issued to each employee as his individual record, and on which stamps in the necessary amounts are periodically affixed or impressed, adequately meets these two essentials—popularizing the plan as individual insurance and providing efficient administration.

INSURANCE A REALITY

Stamp pass books, issued to and possessed by each employee insured, at once make the insurance feature a reality, and render it possible to keep track of the durations and wage rates of individual employment with-

out elaborate record keeping, investigation, cross-checking, etc. The system of affixing or impressing stamps is by far the least costly and the most flexible to administer from the standpoint of all three parties concerned—the Government, the Employer, and the Employee.

Any alternate method must take the form of reports or returns similar to those used for income taxes, certain sales taxes, etc. While systems of this kind may be adequate for some purposes, they will be found to be inadequate for unemployment insurance, if the above requirements are borne in mind.

Practically all countries which have adopted social insurance plans—including most of the advanced countries of Europe—have permanently adopted the stamp pass book system.

This is the result of experience over a great many years, during which many alternate plans have been unsuccessfully tried.

The recently enacted Canadian Employment and Social Insurance Law in its administrative regulations (Article 18), specifically calls for "the payment of contributions by means of revenue stamps . . . affixed to or impressed upon books or cards . . ."

The only legitimate criticism of the stamp system may be said to be the difficulties of handling, affixing, and cancelling adhesive stamps, particularly in the case of large employers.

To meet this condition, modern mechanical invention and development makes available a "Revenue Meter," which may be used to record and impress the stamps directly on the books or cards with great convenience and simplicity to all concerned. Such devices have been successfully used in postal services throughout the world for the past fifteen years, and have collected billions of dollars of postal revenues.

STAMP METHOD DESCRIBED

Following is a description of the operation of a State Unemployment Insurance Pass Book system coincident with the use of adhesive stamps for small employers and impressed Meter Stamps for larger employers. The method outlined provides for the handling of all types of contributions and furnishes the basis for the eventual paying of benefits with the least administrative detail.

The Stamp Pass Book System operates fundamentally as follows, with variations and ramifications to suit particular cases:

The State through its employment offices or other agencies issues to all employees whose employers are subject to the tax, cards or pass books (see Exhibits "A" and "B") for a period (i.e., year, half-year, etc.).

Upon permanent employment (or if employed), the employee delivers this card or book into the custody of his employer. The employer is responsible for it during the time he employs the worker.

The employer who takes custody of the Pass Book merely:

1. Purchases the required stamps or insurance meter "settings" from a State Agency.
2. Affixes or impresses in the proper place in the Pass Book the insurance stamp covering contributions on behalf of that worker as due under the law.
3. Produces the Pass Book, fully paid-up (stamped) for State inspection when required.
4. Produces the Pass Book, fully paid-up, for inspection by any employee at such reasonable times as requested by him.
5. Surrenders to the employee his Pass Book, fully stamped for the period of employment at the termination thereof.

If lithographed adhesive stamps are used, the employer after affixing, cancels each stamp by pen and ink, or by suitable rubber or metal hand-stamp. If Meter Stamps are im-

printed this is unnecessary as, being impressed, they cannot be removed or re-used.

At regular periods (viz. annually or semi-annually) the State Agency calls in the old Pass Books, and checks and files them for future reference purposes. New ones are issued for the succeeding period.

Under a merit rating or other individualized account plan the State would maintain a single master control record for each employer, but until a worker was actually paid benefits there would be no necessity of transcribing the details to an individual card.




STATE ADMINISTRATION

1. The Stamp Pass Book system furnishes the State a means of collecting 100% of the taxes and contributions. Under any system of reports or filed returns, such as the income tax, there are innumerable difficulties involving evasion and non-payment, and it is only by constant investigation and threats that payments are secured. The use of stamps as evidence of the payment of unemployment insurance contributions by either employer or employee, or both, requires each one to check the other. This *automatic* policing cuts administrative costs materially. It is not possible for dishonest employers to hold back deductions from their employees' wages for their own use.

2. Overhead expense in State Offices is reduced to a minimum. There is no necessity to transcribe and check from employers' returns mil-

lions of small sums for posting to employees' cards, because each employee's record becomes immediately available *when it is necessary to have it—at the time benefits are claimed.*

Under a law so drafted as to reduce administrative detail to a minimum,

WEEKS ENDING		
JULY 25.	AUG. 1	AUG. 8
	<div style="border: 1px solid black; padding: 5px; text-align: center;"> STATE INSURANCE PREMIUM PAID <div style="font-size: 2em; font-weight: bold;">0 96</div> AGENCY OF GOVERNMENT </div>	
		
		
TOTAL 54¢	96¢	\$1.34

SAMPLE PAGE FROM PASS BOOK SHOWING USE OF ADHESIVE STAMPS AND METER IMPRESSIONS

the amount of benefits to be paid will be based on wages received and weeks worked. All that is then necessary at the time benefits are claimed is the record of the contributions as indicated by the stamps in the Pass Book. Consideration

should be given to this detail at the time legislation is being prepared.

This is in contrast to the useless expense involved in the State's maintaining current records for those hundreds of thousands of workers who will never become unemployed, and thus never request benefit payments.

IDENTIFYING WORKERS

3. The use of Pass Books furnishes a means of identifying workers and immediately knowing the names of their past employers—as evidenced by the employers' cancellation marks.

Under any return or report system, European experience has found that endless confusion, mistakes of identity and losses in continuity of records occur. Not only does it cause tremendous expense to the State, but it weakens the worker's feeling of security and confidence in the insurance itself.

4. The convenience and protection of the Pass Book in meeting the problem of accurate record-keeping during shifts of employment and residence are among the most important advantages.

No other system can meet such conditions adequately because the mere change in employment with the attendant shifting of the book to the new employer allows no possibility of error. Thousands of workers who may never request benefits will automatically transfer their own records without the necessity of written, or printed changes by the State.

5. In the event of disputes or misunderstandings, the State can arrive at an equitable adjustment with more speed and accuracy, and less administrative cost by means of the Stamp Pass Book than by any system of filed reports and return.

6. Many unemployment insurances plans require employers of small numbers of employees to make contributions. The Stamp Pass Book solves this administrative problem. The wage records of the little four- or five-man commercial establishment such as the bootblack, the candy shop the local carpenters, plumber, etc., will not lend themselves to insurance payments collected by a deferred return system; but stamps may be readily purchased, and affixed in a Pass Book by anyone.

FROM THE EMPLOYER'S VIEWPOINT

1. The Stamp Pass Book system is also the simplest, safest, and most efficient method of payment for the employer.

He does not constantly have to file reports and throw open his payroll records and books to State inspection, secure and file receipts, etc. Insurance stamps of the correct denominations for the various classes of employment are all he requires.

For the smaller employer it requires little time, labor and attendant book-keeping, to affix and cancel stamps in the Pass Books, particularly if designed for convenient handling.

If the employer's payroll is a large one, the installation of an authorized tax meter, as explained below, can

complete the job in a comparatively short time.

2. The employer can furnish almost instant proof to his workers that he is regularly discharging his insurance obligations week-by-week.

With the return method he would be constantly put to considerable annoyance, delay and confusion in order to produce ledgers, receipts, etc., to satisfy his workers that their insurance had been paid in full.

3. The employer is relieved of much red tape in his accounting and payroll records every time a worker enters or leaves his employ. He has only to accept or surrender the Pass Book.

Upon receiving the Pass Book of a new employee he knows the exact spelling of the employee's name and, if he has worked for other employers during the period of the book, the names of those other employers. Any personnel manager appreciates the difficulties coincident to obtaining accurate past records.

THE WORKER'S RECORD

1. The worker knows that any deductions from his wages have actually been paid into the State fund.

2. Each employee has a means of identifying himself and his record.

3. As the stamps indicate a proportion of wages, a worker has actual proof of what he received. It is *his* record, and not what someone else may claim was paid to him. As most workers receive either cash or checks which are cashed and not deposited in bank accounts, they

would otherwise have no means of proving the amounts of their past wages. Without their own records they would be subject to the false statements of any dishonest employer who had not been paying his tax in full.

4. In the event of a shift of employment or residence, insurance stamps, properly affixed to, or impressed upon, the employee's Pass Book, are as valid in one part of the State as another, and for one trade as for another, without the delay of application record, investigation, etc.

5. The Insurance Stamp Pass Book gives the employee constant, tangible, easily-understood evidence of his own social security. The deferred method of reports and returns is bound to leave the mass of workers uncertain and vague.

Any return or payroll tax system could have no reality for them as insurance. The benefits would rapidly degenerate into a demoralizing Government "hand-out," which unfortunately characterizes so much of our direct relief.

Insurance stamps, on the other hand, regularly affixed to each employee's individual. Pass Book, whether or not there is a deduction from his pay, are something earned by employment. Future benefits will bear no taint of being public charity. He will have earned them!

Any social insurance plan depends for its success upon the *confidence* which the policyholders (workers) place in its administration. The Insurance Stamp Pass Book is an ideal

instrument to further and maintain this much needed confidence.

METER IMPRESSED STAMP SYSTEM

There can be only one legitimate objection to the use of the Stamp

denominations to be required. For such large scale operations, the use of adhesive stamps is somewhat slow and cumbersome. It is by way of answering this objection that we arrive at the fundamental advantage

SOCIAL INSURANCE AGENCY OF GOVERNMENT .21 PREMIUM PAID P.B. METER 0000 LICENSE 0000 JAN. 2	SOCIAL INSURANCE AGENCY OF GOVERNMENT .21 PREMIUM PAID P.B. METER 0000 LICENSE 0000 JAN. 9	SOCIAL INS. URANCE AGENCY OF GOVERNMENT .23 PREMIUM PAID P.B. MET. 2 0000 LICENSE 0000 JAN. 16	SOCIAL INSURANCE AGENCY OF GOVERNMENT .25 PREMIUM PAID P.B. METER 0000 LICENSE 0000 JAN. 23	SOCIAL INSURANCE AGENCY OF GOVERNMENT .25 PREMIUM PAID P.B. METER 0000 LICENSE 0000 JAN. 30	SOCIAL INSURANCE AGENCY OF GOVERNMENT .25 PREMIUM PAID P.B. METER 0000 LICENSE 0000 FEB. 6																																						
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SAMPLE CARD FOR SIX MONTHS EMPLOYMENT WITH METERED TAX STAMPS IMPRESSED

Pass Book system, and that would be felt principally by employers of large numbers of workers, who must stock large quantities of adhesive stamps in varying denominations, affix them weekly to pass books, cancel them, and see to it that there is always on hand a proportionate stock of the

of the use of METER IMPRESSED STAMPS.

Under the meter system, the payer, instead of affixing a lithographed adhesive stamp, impresses upon the matter a Meter Stamp by means of a special printing and recording device authorized by the State for the pur-

pose. Prepayment is effected by having the device, always under State lock and seal, brought by the user to the proper agency and set for the amount required. Cash payment is made by the user at the time of setting. The meter, so "charged" for a lump sum of postage or tax prepayment, is capable of impressing stamps of various values until this sum has been exhausted, when it automatically locks and prevents further use until reset. The meter does not have to be exhausted, however, before being reset. Amounts can be added to the balance remaining at any time.

Meter Stamp devices for printing postal and tax revenues are, of course, manufactured in various types and sizes, suitable to different government and commercial requirements. Some are hand-operated, others electrically operated and can handle matter automatically at high rates of speed.

METER MACHINES

The meters are usually the detachable portion of a larger feeding and driving mechanism. They are so designed that stamps of varying values (from 1¢ up to \$100.00) may be printed in a single operation by the user, the control being in dollars and cents. Each meter has two registers or counters, which change simultaneously by the amount which has been printed. The first, the ascend-

ing register, keeps a running perpetual total of the amount used. It is never reset, and is inaccessible, even to a State Inspector. The second, the descending register, shows the balance on hand, likewise in dollars and cents. This is the register, under State lock and seal, which is set at the time of new revenue purchases. The accounting is therefore automatic, and, being designed so that one register checks against the other in mechanical operation, is also fool-proof and fraud-proof.

The Meter Stamp—the printed impression—should probably contain:

1. Name of the State and its insurance.
2. Amount of the tax. If it is a joint contribution, this would be the total contributed by employer and employee.
3. The meter number, and manufacturer's identification.
4. The user's identity by license number.

The printing die can thus contain practically any or all information required within the minimum limits of a $1\frac{1}{16}$ " square.

The Pass Books are fed into the machine, printed after a selection of values, ejected and stacked in an orderly pile, while the amounts, although varying, have been automatically recorded in the meter registers.

A Proposal to use Tests of Muscular Power in the Selection, Assignment, Pay and Retirement of Employees.

Strength Tests *and* Their Uses

By FREDERICK RAND ROGERS
Boston University

ONE of the employment manager's functions should be to discover and employ those who are strongest, particularly for work which requires the use of the large muscles; and to assign those who are strongest—in-proportion-to-their-size to work which requires endurance, or many or often repeated muscular contractions.

Muscular strength upon which largely depends an individual's ability to produce, is a prime factor that has so far escaped sufficient consideration.

Moreover, muscular strength is needed by the so-called brain-worker; and perhaps an abundance of this physical power is more necessary for successful executive functions than for labor.

FATIGUE

The importance of strong skeletal, or voluntary, muscles is well demonstrated by imagining employees lacking this quality "at work." Imagine the industrial efficiency of a worker with just enough strength to reach the factory or store or office, and then, because of the fatigue of these efforts, to collapse and be sent home. His efficiency is just above nil. *So is his strength.* Such cases must occur sometimes throughout industry, from executive officers to floor cleaners. Still more common are workers with enough strength to "go through the motions," but insufficient endurance (surplus strength) for effective effort.

Taking another tack, what is it

that incapacitates for work the convalescent from disease? Not disease itself, for the virus has been overcome. Not lack of skill or knowledge or general intelligence or loyalty or will, for all these are present and may be unimpaired in the convalescent. The single factor which renders him unfit for duty is weakened muscles, which will not support his weight or endure more than a very few contractions before needing rest. Conversely, employees with an abundance of strength are able to work faster and longer hours and with greater precision than those with only average strength. The muscularly stronger employees fatigue less rapidly, their attention may therefore be directed more efficiently to the tasks in hand. Consequently they produce more goods or services.

It is likely also that muscular power—a certain modicum, not an unlimited amount—is greatly helpful to the brain-worker, whether salesman or manager or organizer. For “mental fatigue” is a misnomer. Nerve cells cannot be fatigued by any but the most extraordinary number and rapidity of impulses. “Mental fatigue” is really interference with the flow of neural activity by the fatigue products of muscular activity, a fact demonstrated repeatedly in psychological and physiological laboratories. “Raise muscular strength and endurance and you increase mental power and endurance” is the surprising but logical corollary.

Possibly hod-carriers need more

muscular power than executives (though the latter usually have more). Typists need back and forearm strength rather than, or more than, shoulder girdle and leg strength. The most efficient button pushers and lever pullers are probably small persons with relatively high all-round strength or endurance.

These are details. What is most significant is that men and women, *certified as sound in health by medical examination techniques*, vary in muscular powers over a relatively wider range than they do in intelligence. Some men are actually four times as strong as others, even when subjects of identical age and weight are compared.

Now employment officers do use intelligence tests, at least in a narrow range of application. No one would knowingly engage a moron or imbecile for clerical services. On the other hand, the muscular strength of applicants for many kinds of labor, in which strength is likely to be as important as skill, continues to be more or less ignored.

Undoubtedly several questions arise in the reader's mind at this point. How may strength be measured definitely? i.e., in a highly valid, reliable and objective manner? Can such a measure be applied economically?

SEVEN TESTS

Employers will be interested to know that a battery of seven dynamic strength tests is now available, which may be quickly and easily adminis-

tered. Briefly, the tests include the measurement of:

(1) *Lung capacity*, using a wet spirometer into which the individual blows, forcefully expelling the air from his lungs. Lung capacity, in cubic inches, has been determined to be of great significance in nearly all experimental tests of physical condition. (2) and (3) *Grip strength* of both hands, in pounds, using a hand dynamometer to measure the strength of both right and left forearm muscles. This measure alone, when interpreted in relation to the sex, weight and age of the individual, is an important indication of physical condition. Grip testing has been practiced experimentally for nearly a century by physiologists and psychologists. (4) and (5) *Back and leg muscle strength* in pounds, testing the lifting power of back muscles followed by the leg muscles, using a back and leg dynamometer. (6) and (7) *Strength of upper arm and shoulder girdle muscles*, in point, using "pull-ups" to bar on rings to measure arm flexion and downward scapular rotation, and "push-ups" from parallel bars or stall-bar bench to measure arm extension and downward scapular rotation.

The tests are easily scored, requiring simple arithmetic computations. The scores of each individual on the seven items of the test are totaled, giving a crude or achieved *Strength Index*. Averages or norms have been scientifically determined for all combinations of sex, weight and age of workers. By using the norm charts

and dividing the achieved Strength Index by the norm for the sex, age and weight of the individual, a quotient called the *Physical Fitness Index* (P.F.I.) is calculated. The P.F.I.'s of individuals may range from as low as 30 to 40 for those in poor physical condition to P.F.I.'s approaching 200 for those who are in extremely fine condition.

The tests mentioned above have been scientifically validated, and have had a twelve-year try-out period. In fact, the number of tests given must now exceed a million. The reliability co-efficient of the battery is between .97 and .99. The use of mechanical measuring instruments and standard testing technique, render the tests highly objective. A large number of schools and universities now use them, particularly in New York State.

ONE EMPLOYEE PER MINUTE

This battery of P.F.I. tests is one of the least time-consuming personnel efficiency tests. When administered by trained testers the entire battery may be taken by each individual in from ten to fifteen minutes. Workers may be passed through the testing room at the rate of about one employee per minute by using three or four testers and as many clerical assistants.

Other health examinations do not measure muscular power quantitatively. Of course the medical examination is the first indispensable step in determining the propriety of employing and assigning an applicant,

for the presence of disease will endanger others and incapacitate the applicant himself, while defective vital organs will be incapable of creating the strength to perform. *By the same tokens*, strength testing should also be an indispensable step in assigning applicants. For of what use are sound vital organs if the muscles are too weak to use and enjoy them?

MAINTAIN PERSONNEL EFFICIENCY

The selection and assignment of employees are only the first uses of strength tests. "Maintaining the physical powers of employees in service" suggests a far more productive program. For one's P.F.I. does not remain constant from week to week and year to year, like an I.Q., but fluctuates over a very wide range. The average young man or woman has a P.F.I. of about 90. That is, his or her strength is about 10 per cent below the norm for persons of like sex, weight and age. Many however have strength superior to normal. Some are from 20 to 50 per cent above their norms—their P.F.I.'s are from 120 to 150. As convalescence from serious illness begins the P.F.I. is not above 10, or 90 per cent below average for one's norm. *It may easily be raised, in the average employee under forty years of age, to 120.* Exceptional young men and women may attain P.F.I.'s above 200. One has been recorded at 232: a 17-year old boy weighing 175 pounds, whose Strength Index is 5800.

The first step before increasing an employee's physical efficiency is to determine his present status. If his P.F.I. is below 80 (and there is probably a percentage of 10-15 in any factory, shop or office below this level) then he needs close attention by the medical department. If he is above 130-140 it is likely that he is over-straining himself and needs relaxation. No matter where he stands on the health scale, if he is changing his position from weak to stronger or vice versa, he should know it and modify his daily habits to meet any anticipated dangers. Tests should be given and health programs modified at least annually for all employees and monthly for those in poor health.

Experiments already made indicate that such a program as is hinted at above would raise the physical fitness of any organization's personnel from ten to twenty per cent, at a cost of less than a dollar a month per employee.

ASSIGNMENT OF JOBS

A third problem is that of allocating employees to jobs in accordance with their powers, or developing in employees strength where it is most needed. Of the two alternatives, personnel directors may possibly be safest in the former. For the human body, while highly adaptive to needs, is very various in proportionate development and capacity for improvement. However this may be, the major problem of adapting work to powers, or powers to work, is a

very real one which employers would do well to consider seriously.

RETIREMENT AND STRENGTH

Another difficult problem which may need to wait another decade for solution, but which is real is basing retirement on a physical, as well as a calender, criterion.

Who would deny, for example, that some men and women are more efficient at seventy than others are at fifty? The greatest value of a physical criterion for retirement may not be to extend the employment of some to seventy-five, but to discover and retire at fifty-five or sixty those whose efficiency has dropped to the point where they cost more than they produce.

EMPLOYEE APPROVAL

There is a distinct possibility of employee disapproval of the testing program. Fearful of being discarded for stronger, more efficient workers; certain that their weaknesses, so carefully hidden from foremen and physicians, will be discovered; apprehensive lest ways of living will be changed—many employees will re-

sent strength testing as vigorously as they have other moves for improving efficiency.

And they will be at least half right. For strength tests cannot be cheated. They measure vital qualities. They are easily ridiculed but at the same time are profoundly challenging. Let the reader unsure of his own strength examine his emotions as he assays this analysis!

No, many employees who fear and oppose strength testing will have a very real basis for their fears. But we repeat, they will be only half right. Their error will be failure to realize that an objective physical fitness testing program, measuring muscular power, utilized to adjust work to ability and as a basis for health-improvement will greatly increase their capacity to enjoy life itself. For happiness depends infinitely more on physical fitness than on money; and the store or shop or office or factory or transportation service which undertakes a strength-testing *and* health-improvement program is bound eventually to be a happier, as well as a more efficient, organization.

Mr. Ward Writes with Enthusiasm about the Public Employment Center in Cincinnati, Describing the Newest, Latest and Best Methods and Machines Installed There.

Job Placement *in Cincinnati*

By ROSWELL WARD

Cincinnati, Ohio

CINCINNATI is the latest city to organize a public employment center, intended not only to centralize placement resources, but also to develop more advanced public employment methods.

Coördination of an employment office with all of the complex units of our public and private relief and social agencies, and related activities, is not an easy task. Effective co-operation between all of these units in meeting their dual objective of emergency relief and long term social security is probably one of our major administrative problems at present. It is therefore very much to the point to set up an organization in which the element of community coöperation is a basic and fully recognized major objective, rather than an incident to the scheme of operation.

In Cincinnati for example, the Employment Center is in contact with a wide range of industrial, commercial, and retail employers, all of whom have special and urgent needs; it is daily registering, classifying, re-interviewing and placing a substantial number of unemployed workers. In many cases, through its Consultation Services, it is dealing directly with a variety of vocational and occupational adjustment problems and is making referrals to the schools, the adult education classes, and recreation, health, social and character-building agencies.

There are, in addition to those basic elements already mentioned, several unusual features in the organization and the procedure in use. While applied in this case to the work of a public employment office, there

are points of considerable interest to anyone concerned in activities which involve large scale registration and record keeping.

To an observer familiar with traditional public employment office procedure the most unusual development is the functionalization of the organization. In place of the usual combination of registration, classification and placement and employer contact duties, carried out by the same individual through a rotation of functions; the tendency in Cincinnati has been towards the employment and training of specialists in each of these functions. This separation of the function of registration and placement, for example, makes the placement officers entirely dependent on the records selected for them, (through a procedure which will be outlined) rather than permitting memory or notes on recent or outstanding applicants to enter into the selections for referral. This is designed to prevent any subconscious or conscious favoritism in selection of applicants for referral.

Instead of the familiar expedient of a combined registration and placement officer constantly working with the file of applicants registered in a particular division, all records are kept in a central file. The records themselves are an innovation, as they combine the best features of business, social agency, and personnel office practice by using a standard $8\frac{1}{2} \times 11$ folder, with generous space for data on the outside and inside of the folder, and the additional advantage

of being able to use the folder for letters of reference, tests, reports, interviewers notes, etc. This type of record, while it requires somewhat more space, has an important future utility advantage, as Cincinnati's employment records may be immediately used, when and if necessary in administering unemployment insurance.

The procedures involved in the very important work of classification are described by Dr. Thompson:

"Facilities for testing the capacities and abilities of each applicant are available, in addition to the customary technique of interviewing. Here the usual census facts are obtained, the employment history, a systematic appraisal of personal characteristics, the information on the previous experience as reported by former employers, plus such testing as may assist in giving the Center a fairly complete picture of the applicant.

"As the result of this method each applicant is classified for as many or as few occupations as are reasonable within the limitations of his *ability* and experience. This extension of *range* of occupational outlets is based on the principle that the functional differences between many different jobs are of little significance, and that the basic abilities required in many jobs are similar. For example, the degree of mental alertness required for stenographers, bookkeepers, stock clerks may be about the same. If the job requires a special skill that can be learned only after an extensive period of special training, then free

transfer from one job to another is unwise. If, on the other hand, the great majority of jobs require skills that are quickly learned, then the basic requirement is adaptability and trainability, and transfer from one job to another is not only possible but very desirable.

"If the principle is considered in relation to the economic picture, the importance is still more striking. A comparison of the production level and the number of persons employed in various industries shows that the number of men required to maintain any given production level is less than the number of men required in 1928-29. This means that a large number of workers who during the past few years have been dislocated, will continue to be at a disadvantage so far as their ability to return into their former occupation is concerned. Such people fall roughly into four groups, viz.: (1) those whose former trades are now obsolete, (2) those who have lost their former skills, due to either unemployment or to a forced change of occupation, (3) those who have deteriorated and become maladjusted as a result of the recent economic stress, (4) those who have left formal education but as yet have been unable to attach themselves to a formal payroll. If any large proportion of these people are to be placed in employment, they must be studied, properly diagnosed, and often retrained, and redirected. It is imperative then that each applicant be studied during the course of his registration, with these ends in

view. A proper part of the employment procedure then is *guidance* as well as registration.

With this introduction to the functional organization; the use of central files; and the method of classification; we can easily visualize the course of a new applicant through the mechanics of registration and classification. We must remember that in this whole process he has not once made contact with the placement officer who will eventually refer him to a prospective employer. The link between the registration and placement functions is one of the most unique and most effective of the new methods used in Cincinnati. (The only other place where it is used is in the Central Casting Office in Hollywood!)

When a new applicant's record reaches the central files, after registration and classification, it may have from one to ten occupational classifications, together with very complete "census data," (the term used to cover all information on the individual, his family, etc.). This information is "punched" on the familiar type of Hollerith card, which is now used in most large scale statistical operations. A separate card is automatically made for each occupational classification of the individual, and they are filed by occupations. John Jones' record, for example, has now become a series of non-committal looking cards, each with a series of punched holes by which John Jones is identified by means of a serial number. The orig-

inal folder for John Jones is filed numerically, according to his serial number. A cross index card, filed alphabetically, bears John Jones' name, address and date of birth and is the connecting link between the folder and the punched cards.

Now let us shift the scene to the placement officer, who is receiving a job order over the telephone. He records a call for a man who can operate a Warner and Swasey turret lathe, who has his own tools, who is between the ages of 25 and 55 years of age, and who lives in Western Hills. A reference to the map gives the "Census Tract" number for that area. That goes on the order also. Then it goes to the central file. In the usual placement office, the cross-indexing system prescribed by the United States Employment Service would serve to locate the available turret lathe operators, but a hand sorting process would be necessary to select for applicant's possession of his own tools, for age, and for residence. Since many job orders have much more detailed specifications than this, the problem of selection becomes a compromise between the cross indexes that are available and registration interviewer's memory.

In Cincinnati, however, a soulless, but relentlessly accurate and impartial machine makes the first group selection. The order form goes to the operator; from the file come all the punched cards for the classification called for, the machine swallows up the larger pile of cards and after a few passes spews forth a relatively

smaller pile of cards, representing the men who meet the special requirements we have noted. Then the little pile of punched cards disappears into another machine and the serial numbers of those whose cards were selected are printed on a paper tape. Using this list the original folders are taken from the central file and are sent to the placement officer. Out of 500 turret lathe operators, the machine has, in five minutes, selected the two dozen men who meet the employer's requirements. Every man has been considered, every man has had his chance, and the initial selection has been made strictly on a basis of the employer's specifications. They call this group of selected applicants a "panel," from which the placement officer can make his final selection, as the machine cannot presume to replace the final judgment of a trained placement interviewer.

Telephone calls and motorcycle messengers often summon the persons whose cards were finally selected. John Jones sits rather nervously in the placement division's waiting room (soon to be perhaps the only employment service waiting room to be equipped with books and magazines as a full-fledged branch of the public library), and within a few minutes is on the way to interview the employer. This sort of thing eventually gets done in any public employment office, but Cincinnati's claim is that its employment center does it more accurately; with greater speed; with a wider opportunity for search-

ing out every occupational possibility an applicant may have, and with a greater degree of certainty in being sure that John Jones actually has the experience and aptitudes for the job. The problem of having ones *entire abilities* considered, regardless of their diversities, is solved by this procedure.

John Jones may have a young son who wants a job and in the Cincinnati Employment Center the Junior Division was established because of the very evident need for special attention to the problems of job finding for young people under 21 years of age. In some states, notably New York State, junior placement has been handled by an entirely separate Junior Placement Bureau, functioning actually in close coöperation with the State Employment Service. In other sections there has been a tendency to regard special service for juniors as a "coddling" process which should be avoided, or which cannot be considered because of budgetary limitations.

In Cincinnati both extremes have been avoided, by delegating the responsibility for initial reception, registration and occupational classification of young people to the Junior Division; leaving the work of selection for referral to jobs, interviews before job referral, etc. to the divisions of the Center which also handle adult placement. However, a very close coöperation exists between the Junior Division and the Placement Divisions, including interchange of information on registrants and job opportunities,

rotation of Junior Division personnel in placement and employer contact activities and conference discussion of junior problems.

Provisions are made not only for junior consultation work, but there is also an Adult Consultation Service, which deals with all matters concerning occupational adjustment, adult re-training and the handling of the innumerable "human" emergencies which occur in the daily operation of the center, (which usually require immediate referral to some other organization). This service is under the direction of Dr. Frances Hollingshead, formerly Director of the Buffalo Foundation.

The research program naturally divides into two main objectives. First is the "study of opportunities for absorption of workers in the community" which in less formal terms means a complete survey of the extent and kind of employment offered in the Cincinnati area; trends in employment and employers' requirements; seasonal variations; "vanishing occupations," and new employment opportunities. The second part of the research program is concerned with further study of the various techniques used by employment offices in registration, classification, selection and referral of applicants.

The results of these two inquiries will together form the basis for meeting the present and future responsibilities of the employment center and will assist materially in its contribution to planning, in coöperation with other community activities,

and effectively putting these plans into operation.

The three major executives who have planned the work of the Cincinnati Center and are now putting their plans into effect are: Colonel Henry M. Waite, Director of the Regional Department of Economic Security, of which the Center is the unit under discussion. Colonel Waite was City Manager of Dayton, Ohio, then City Engineer of Cincinnati. During the World War he held high command in the Railroad Administration of the American Expeditionary Force. In more recent years he was Chief Engineer of the Cincinnati Union Terminal. For a time he was stationed in Washington as Assistant Public Works Administrator, a post which he resigned to accept his present responsibilities.

Stanley B. Mathewson is in charge of the operation of the Employment Center. Prior to the war he had a variety of engineering and personnel jobs and in war service was, at the time of the Armistice, in charge of trade tests in all U. S. Army Camps. He was a member of The Scott Company Engineers and Counselors in Industrial Personnel, and for sev-

eral years was Personnel Director of Antioch College at the time that institution developed its cooperative program. His work at Antioch included his book "Restriction of Output Among Unorganized Workers," and service with the National Coal Commission. He is co-author with Dr. Walter Dill Scott and Robert C. Clothier of "Personnel Management." He came to the Cincinnati Employment Center from work as Director of the National Reemployment Service in Ohio, and as Regional Director for the National Labor Relations Board.

Dr. Lorin A. Thompson, Jr., Director of Research, was educated at the University of Omaha and at Ohio State and has held positions at Purdue, University of Pittsburgh, Ohio State, and was for several years Professor of Psychology at Ohio Wesleyan University, from which position he was "drafted" to assist in the organization of the research program of the Cincinnati Center. The heads of all the major divisions won their respective positions through competitive City or State Civil Service Examinations.

News Notes

PHILADELPHIA MEETINGS

The Salary and Wage Administration Section of the Methods Group of the Philadelphia Personnel Association has been holding a series of meetings for the following purposes:

1. To provide a means whereby those engaged in salary and wage administration activities may discuss their problems and interchange ideas.

2. To provide a means whereby those not familiar with the principles and practices of effective salary administration plans may become acquainted with the advantages and procedures thereof.

The meetings were announced by Samuel L. H. Burk, chairman of the Methods Group sub-committee on Salary and Wage Administration.

Questions taken up included:

How can the necessary information concerning the job be best secured? Is the use of "questionnaires" advisable? Is such information adequate? Are personal interviews advisable? What is the value of statements concerning duties and necessary qualifications? (a) When made by employees? (b) When made by supervisors? To what extent is the job analyst justified in modifying such statements by applying his own judgment?

How can the information secured be best recorded? Should a printed form be used for recording the infor-

mation secured from questionnaires and/or interviews? If so, what form should it take? Under what circumstances should some sort of preliminary specification be prepared, prior to the writing of the final job description? Is it advisable to use a final specification form which has been used in other companies? What are the advantages of the use of standardized terminology? What are the basic requirements of a good job specification form?

What are the relative advantages and disadvantages of grading and classifying jobs without any attempt at breaking the job down into its "elements"? How can the job be broken down into elements for more detailed comparison? Can the same break-down be used for different industries or different companies within an industry? If not, can we set up a general division of "efforts" or qualifications to be used as a guide for each individual study?

What has been the experience of the group in the use of point rating schemes? Do these point rating schemes eliminate the fallibility of human judgment or does judgment still have to be introduced in order to arrive at the best possible result? What are the dangers of too close adherence to point ratings? What are the dangers of relying entirely on the judgment basis?

Should department heads partici-

pate in the initial grading, or should they be asked to criticise the work of a rating group? What should be the personnel of the rating group? What is the optimum size of the group?

To what extent should present rates determine the conversion of the new grading to new rates? What weight should "going" or market rates bear on the conversion? Under present conditions, how accurately can "going" rates be determined? For companies having plants in various localities, how can geographical rate differentials be justified?

Presuming that no *general* rate change is to be made (e.g. a 10% increase in all rates, or a 5% decrease in all rates) how can the individual rates be adjusted with minimum friction? What is the responsibility of management for past errors in rate? What, if any, period of adjustment should be allowed, especially for men whose rates are to be reduced? If a *general* rate change is contemplated, should the new schedule be installed before, simultaneously with, or following the general change?

Can "ranges" of rate be assigned for all classes of employees, and if not, for what classes can they be provided? When ranges of rate within grades are employed, who should control increases within the ranges? How often should employees be considered for increases within the range? What is the best time for these considerations, i.e.: one set time for all employees; on the individual anniversary dates; all employees in one organization unit at one time; or some other

schedule? What factors should be considered before granting or refusing the increase? How should the amount of the increase be determined? When an employee is promoted from one grade to a higher one, when should he receive the higher rate? When an employee is demoted to a position in a lower grade: Should his new rate be set at the minimum or the maximum of the lower grade, or at some point in between? When should the decreased rate be made effective?

HUMAN ENGINEERING

The 4th Annual Report of the Human Engineering Laboratory of Stevens Institute of Technology, has just been issued by Mr. Johnson O'Connor. It describes the work of 1935 and plans for 1936.

Four reports were issued:

No. 1. Development of tests for graduate nurses. As a result of the findings the Presbyterian Hospital School of Nursing administers the English vocabulary test, to every applicant for nursing training; and then sends those who obtain satisfactory scores to the Human Engineering Laboratory for a complete aptitude test before enrolling them.

No. 2. Development of a new form of the English vocabulary test, containing words which have not previously been used therefore free from the effects of coaching which may influence scores on earlier forms, some of which have been in use more than fifteen years. Although this Report was not issued until October, 1935,

form EA of the vocabulary test, which it describes, is now being used by public and private schools and by business organizations in ten different states.

No. 3. Describes researches which showed that an individual whose behavior differs from his inherent personality, seems to encounter difficulties in social adjustment. This report describes an attempt to measure behavior, independent of personality, to gain a better understanding of these maladjustments.

No. 4. A Study of the Physics Technical Vocabulary Test. This report describes a second revision of the Physics vocabulary test. The test is not yet sufficiently accurate to be made available to schools.

Research projects to discover mental elements, which have been completed during 1935, but which have not yet been published in report form, have dealt with tests for word checking, number checking, creative imagination, inductive reasoning, art, free association, wiggly blocks, observation, clock reversal.

The report reveals that during the past year temporary laboratories have been set up in the following schools, colleges, and organizations: Asheville School, Bement School, Cranbrook School, Deerfield Academy, Eaglebrook School, George Innes High School, Great Neck High School, Miami University, Morristown School, New Trier High School, Northfield Seminary, North Shore Country Day School, Providence Country Day School, Ridgewood High School,

Scotch Plains High School, T. Coleman Andrews & Company, University of Michigan, Willard School (students sent to Ridgewood High School).

The testing in the two permanent laboratories, at 381 Beacon Street, Boston, and at Stevens Institute of Technology, has continued to increase. For the past four years testing has doubled each year.

SEARS, ROEBUCK PERSONNEL EXPERIENCE

Some "danger points in adjustment to a new personnel job," are outlined by Paul A. Mertz, in discussing practice of Sears, Roebuck and Co., in the Retail Bureau Bulletin of the University of Pittsburgh.

"Early in the development of the larger units of retail stores in Sears Roebuck and Co.," Mr. Mertz reports, "it was recognized by many store managers and parent executives that specialized assistance to the store superintendent in his personnel responsibilities was essential. It was a few years later that the company believed that the position of personnel assistant should be officially created and managers encouraged to establish such positions.

"At that time only 14 of the 65 'A' department stores had such assistants. Within the year, the number increased. The expansion necessitated the selection locally of women from outside the company, because of the inability to develop sufficient numbers within the company so rapidly. A majority were professionally trained personnel women,

with a minority recruited from the stores themselves after training in another store under a competent personnel woman.

"Job analyses were prepared for managers and for the so-called personnel assistants themselves, to guide them in organizing the activity under the company policy. In passing, it may be stated that the turnover in these pioneer assignments has been surprisingly small and that the company is able to fill most of its personnel jobs today within the company. The personnel women in the company today, with few exceptions, have demonstrated their ability to perform a valuable personnel service, justifying company faith in them and their accomplishment."

Mr. Mertz then goes on to record how some of the new appointees, "for the most part trained and experienced in other connections, failed to measure up in some respects, to the new situation."

"Wherever the blame," he concludes, "the situations are indicative of danger points for the personnel worker to observe. Among the separate characterizations given by store managers were these:

"She was too academic. She thought of training as confined to organized class work, and could not get to the sales floor to help remedy the selling weaknesses that could have been corrected individually on the spot."

"She could not delegate training responsibility. She recognized her own superior ability as a teacher and

tried to do all the training herself. She failed to appreciate that her training job was largely to guide, train, and help division heads and others to do their own training job."

"She never finds time to get out on the selling floor for corrective and individual work. She allows herself to be loaded up with office duties, particularly with employment work, and cannot seem to find time to train. She does not *plan* her time and activities."

"She has allowed other executives to load her with their detail. She finds her time taken up with endless chasing of cash register errors, time-keeping detail, and follow-up of schedules. I am trying to remedy this condition."

"Our employees do not like her. She lacks the knack of keeping their good-will in correcting individual effort. She talks down to them, instead of with them."

"She lacks executive ability. As a time-keeper and office woman she is at her best. But she does not have the ability to influence the conduct of others."

"She is a good talker and a good promiser. But nothing happens."

"She is too maternal. She should be a welfare director only. Her interest in some employees, including executives and their problems, has been misinterpreted as personal. Petty jealousies and even a question of her discretion has been the result. Her work lacks balance."

"She does not understand that her function in the last analysis is to help

the store get more sales through the medium of the right kind of personnel work. She wants to organize courses in all kinds of remotely related subjects, and spends most of her time cutting out paper dolls' (writing manuals).

" 'She has not made any effort to know the merchandise as a background for practical selling help.'

" 'She devotes endless hours to interviewing applicants, to the exclusion of her training functions, when no possibility of employment is imminent.'

" 'She isn't a soldier. She goes feminine on us, or at other times, becomes the prima donna when it is

necessary to discuss with her how she can improve her work.'

" 'She plays favorites. Certain people in the store claim most of her attention. Others feel neglected.'

" 'Our personnel assistant is totally out of sympathy with the store policies and does not appreciate that she came out of a well-organized store with years of personnel management behind it into a position where the personnel job has to be pioneered.' "

" 'It is not to be inferred,' says Mr. Mertz, "that all of the situations mentioned above were left uncorrected. Some of the best personnel women in the company were, at one time, the subjects of some of the above criticisms."

Industrial Relations Platform

BY CONTRIBUTOR

Editor's Note: The Chamber of Commerce in a certain city proposes to organize an Industrial Relations Committee. They have called for suggestions as to a statement of the principles for which they should stand. The following statement is one which they received. Other suggestions, and comments are invited.

THE principles which the Industrial Relations Committee of the Chamber of Commerce is created to further in the public interest are as follows:

DIVISION OF VALUES RECEIVED

1. The objective of business and industry is the production of goods and services to be sold to the consuming public, at prices that are reasonable, and which provide adequate living wages to employees and just profits to investors and owners.

2. The values received from such enterprise should be divided as between employees (in the form of wages and salaries) on the one hand,

and investors and owners (in the form of interest and profits) on the other hand, in proportions that are reasonable fair and equitable.

3. Any employer or employee, or any combination of employers or employees, which seeks or attempts to gain more than a reasonable reward for services or investment, or for other selfish reasons endangers, or causes stoppage in, the flow of goods and services violates his duty to the public and the state.

Alternative Paragraph.

Attempts on the part of either employers or employees to gain a disproportionate share of the values received from their joint enterprise,

in the form of unreasonable profits or unduly high wages, are to be condemned as not being in the public interest.

DUTIES OF MANAGEMENT AND WORKERS

4. In order that employees may develop full earning capacity and command maximum wages, it is the duty of management to assist them to secure employment suited to their abilities, to furnish incentives and opportunities of improvement, to provide proper safeguards for health and safety and to aid employees to increase the value of their productive efforts.

5. Correspondingly the public interest requires the highest degree of efficiency and productivity of workers, consistent with their health, and therefore condemns any voluntary restriction of output on their part.

COLLECTIVE BARGAINING

6. Where employers or employees feel it necessary or desirable to combine for collective action, to secure or maintain their reasonable share of the values received for their goods and services, or for other legitimate purposes, their right to so voluntarily combine shall not be questioned. Such combinations entered into voluntarily do not violate the principles of individual liberty or freedom of contract.

7. Coercion, intimidation or discrimination, either to force membership in such combination, or to

prevent membership in such combination, against the will of the individual or individuals concerned, constitutes a violation of the above principles.

8. Upon the formation of legitimate combination, as outlined above, collective agreements between employers and employees, not against the public interest, may be voluntarily entered into, and should be observed and performed by the parties with the same faith and credit as applies to any valid contract.

9. Such voluntary agreements must not infringe upon the principles of individual liberty or freedom of contract.

a. Employers and employees may not enter into agreement to disbar any person from employment on the grounds of membership in a trade union or other workers association. This shall not prevent an employer from refusing to hire a member of a workers organization, if it is proven that the object and purpose of such member, in seeking employment, is to stir up disaffection among his present employees.

b. Written or tacit agreements, which provide that hiring, transfer, promotion, and discharge of employees shall be totally without reference to membership or non-membership in employees associations, provide the maximum of freedom of legitimate action by both employers and employees.

c. Where employers and employees enter into collective agreement, to the effect that only members of a trade union or specified trade unions shall be hired, this provision shall constitute a condition of employment, ranking with proper eyesight or adequate trade skill, or any other hiring qualification, and shall not be construed as a limitation on individual liberty or freedom of contract.

SETTLEMENT OF DISPUTES

10. The public interest requires that all disagreements and disputes between employers and employees shall as far as possible be settled

through peaceful negotiation and conference.

11. In the event that agreement by these means proves impossible, and economic power in the form of strikes or lockouts is resorted to, public authorities are in duty bound to maintain law and order among the contestants, protect the lives and property of the contestants, and prevent loss, damage, and injury to innocent third parties and the general public.

12. The paramount interest of the public in public utility services, transportation, light and heat, water supply, etc., and the great danger to life, health, and property resulting from stoppage of such services, requires the highest degree of moral responsibility on the part of both utility employers and employees or collective agencies of either. While the rights of employees to withhold services, or of employers to refuse employment, cannot be abridged yet such actions cannot be permitted to disrupt utility services essential to the public welfare.

13. While employees, in the public

service, have the same rights of combination for collective action to protect their legitimate interests, as have other workers, though as servants of the public and the state, they may, when occasions arise, present their case or cases to the public for consideration of their grievances, they may not, through collective action, withhold their services from the public and the state.

GOVERNMENTAL REGULATION

14. Inasmuch as the legislative representatives of the public have enacted, or may in future enact, legislation controlling the relations between employers and employees as to collective agreements, wages and hours, working conditions, etc., it is the obvious duty of employers and employees to abide by and obey such laws, subject to the provision that:

When there is reasonable doubt as to the constitutionality of such enactments, or when the rules and regulations promulgated by governmental officials acting under delegated authority, are reasonably in question, employers and employees have the right to appeal to the courts for protection against infringement or curtailment of their constitutional liberties.

The Story of a Department Store
that has been "Rationalized."
Here is Something to Arrest the
Attention of Retail Management.

Personnel Policies *and* Retail Profits

By OTHO J. HICKS

Manager, Personnel Group
National Retail Dry Goods Association

Editor's Note: The February, 1936 issue of the International Labor Review carried an article describing the "rationalization" program of the Globe Department Stores at Zurich, Switzerland. Mr. Hicks compares the personnel activities of these stores with current American practice.

RATIONALISATION measures in the case of the Globe Stores at Zurich, have been in effect since 1928, the first year of a world-wide depression. During that period the undertaking has been an increasingly profitable operation for its stockholders, it has provided the individual employee with rising earnings, and its employment has increased. Throughout the organization a real sense of individual responsibility exists.

The Globe Stores (Magazine zum Glöbus) at Zurich is capitalized at

8,000,000 Swiss francs, or approximately \$2,666,666. The most recent report of the stores' annual volume shows 22,965,164 francs, or an equivalent of \$7,500,000. It employs an average of 1,224 persons in producing this volume. So far, these figures are entirely comparable with those of American department stores. In the \$7,500,000 to \$10,000,000 group of stores in this country, from 1000 to 1500 persons are employed.

The wage bill of the Globe stores in 1933 amounted to 2,901,352 francs or approximately 13% of its net sales.

For similar undertakings the wage bill averaged 18.25% in this country. Its net profit of 3.2% (741,309 francs) far exceeds that of American stores in this class, which suffered a loss of 1.5%.

More interesting still, as an index of increasing efficiency of management and control, are the ratios of turnover to value of stock. In 1929 the Globe Stores' rate of turnover was 2.5; in 1930, 2.8; in 1931, 3.6; in 1932, 3.8; in 1933, 3.9; and in 1934, 4.27. This steady improvement in effective control of investment contrasts sharply with that of our own stores which fluctuated through the same period with 3.8, 3.8, 4.2, 3.6, 4.8 and 4.7.

The position of this Swiss retailer has not always been as favorable. The reorganisation of work of the Globe Stores is of comparatively recent origin, it having been achieved by a series of rationalisation measures introduced and applied from 1928 until now.

Rationalisation was carried out in two successive stages, the first of which began in 1928 and covered scientific methods of budgetary control in expense and merchandise investment. The second phase was launched in 1930 and introduced a rationalised system of personnel management.

AMERICAN METHODS STUDIED

Before initiating either phase, the new general manager paid the United

States the nice compliment of studying the theory and operation of thirty or more department stores in this country. We impressed him most in our dealings with the human factor and he returned home with a fixed goal of perfection in method of selecting and training personnel, through making "a special point of trying to inspire all of the employees of the Globe Stores with the spirit of and cheerfulness and vitality which struck him in the American stores."

Cicero warned us that "many learn more than their teachers." It can be said that in this case the pupil has outstripped the master. Particularly during the second phase of rationalisation does the Globe Stores, profiting by our experience perhaps, seem to have reached goals in management and personnel still sought by the American retailer.

Having established new and improved measures of the undertaking through budgetary control, the final step of the first stage in rationalisation taken by the Globe Stores was to encourage among retailers of all European countries "groups for the exchange of experience." The result is The International Management Research Group of Department Stores, an association with headquarters in Paris with membership of the leading store or stores in the more important trade centers on the continent and in England. Doubtless this association is comparable with that of American retailers, the National Retail Dry Goods Association, as a clearing

house of retail experience and a vital factor in retail progress.

At the outset of the second stage of rationalisation, an Organisation Board was established under the supervision of a management expert. The first task given to this board was that of analyzing overhead costs to show not only their nature but also their origin. This necessitated the creation of an organization chart, which revealed that the undertaking had been operated with little thought to plan or system, with over-lapping of functions and confusion in the distribution of responsibility and authority. An absence of coördination at the top and of coopération at the bottom made efficient management out of the question. This lack, not revealed in easier times when waste of money and energy could go unnoticed, was felt with double force in the slough of the recent depression.

PERSONNEL A MAJOR FUNCTION

It was decided to divide all activities of the staff of the store into the following five major functions:

1. Finance and control.
2. Merchandising.
3. Publicity.
4. Internal Organisation (Store Management).
5. Personnel.

At this point one notes the first important departure from what was observed in American stores. In this country the typical organization plan

divides work into four functions. Personnel is usually considered a part of Store Management, although there is little reason to believe that it could not be as successfully subordinated to Merchandising, or Control, if subordinated it must be. In the productive trades of America, as distinguished from the distributive trades the personnel function has more often been dignified and emphasized as a major function.

TIME SHEETS FOR EXECUTIVES

Other reform measures pertinent to improved management were the establishment of:

- a. Time sheets for executives;
- b. Task sheets for non-executives;
- c. Working standards; and
- d. Correlation meetings.

All general executives keep a simple but effective check on the way in which they spend their time. By means of special symbols or figures, a continuous record is kept which, when summarized, reveals the relative and absolute value of time devoted to managerial duties. These revelations are "sometimes of a rather surprising kind."

A standardized form of task sheet for the employee is revised periodically by the employee himself and provides in summation usable specifications of responsibilities by function at any time.

As an example of working standards those given the general manager by the organisation board, are noteworthy.

The best methods of guiding subordinates, explaining what is expected of them, coordinating their work, and arousing their keenness are as follows:

(a) Conferences on the objectives, lines of policy, and plans contemplated for adoption;

(b) Conferences on the objectives, lines of policy, and plans finally adopted;

(c) Collaboration of assistant executives in transforming the general plans adopted into more detailed schemes of work, instructions, programmes, and time tables;

(d) Constant spreading of information, by means of conferences, concerning the situations and trends of the business, the principles of management, and the new ideas and techniques of the management;

(e) Examination of results in common, seeking out errors and omissions, and determining and eliminating their causes (ambiguous replies, badly prepared schemes, etc.)."

The correlation of individual effort attains fruition in this meeting plan which provides for a complete flow of information from top to bottom, and backward when necessary.

PYRAMID MEETING PLAN

There would seem to be a marked difference, of technique rather than principle, in method adopted by the Globe Stores and that found in American stores of the same size. "Relying on reason alone in matters of opinion or practice," the Swiss retailer has avoided false distinctions between the supervisor and the supervised. He has made no demands upon employees that he has not made upon himself.

In America, innumerable stores have experimented with and discarded as valueless job rating plans and personnel reviews. Usually these plans have been confined to the lower half of the organisation, rarely to the

group as a whole. The few stores which have had success with this tool of management are blessed with the foresight to employ it from general management down. At best, however, as the one-sided opinion of the supervisor, it is devoid of any element of employee participation by which the worker may control or influence his own job factors. In many instances, American stores have discontinued the use of the pyramided meeting plan for the correlation of individual effort. It has been indicted as a luxury to be dispensed with in depression periods. There is reason to believe that this instrument has never been employed truly effectively by the retailer of this country, perhaps because a major retail vice with us is to employ ideas in form not essence.

Passing over the rationalisation measures taken by the Globe Stores in the functions of merchandising and internal organization, most of which are in no way an improvement over methods observed in America, we may consider further details of personnel organisation and management.

PERSONNEL DEPARTMENT OF 20

To the literal-minded retailer of America, it should be said that in 1934 the Globe Stores employed some twenty persons in the personnel department. A recent appointee to the post of personnel manager was for-

merly general manager of an associated department store. The typical personnel staff in American stores of this size is the executive in charge, seldom more than three assistants and four or five clericals. The personnel manager usually has been or still is the employment manager or training director.

The activities of the personnel service in the Globe stores are subdivided as follows: statistics and data concerning the staff, wages and salaries, hours of work, engagement of the staff, education, insurance, health and welfare, guidance and social problems. Its plan of work for the immediate future deals with questions of job analysis, routing, time and motion study, fatigue research, methods of payment, cost of living, periodical inquiries into the working relations between employees of the undertaking, and practical tests of various systems and methods.

The task sheet of this function also mentions the following activities as already completed or now in progress: definition of the competence of the training function, creation of a pension fund, staff rules, new regulations for purchases by the staff, drafting of working standards for personnel workers, raising of the level of wages and salaries, minimum wage fixing, holidays, grants for sports, overtime, education of the higher grade staff, and living conditions of the staff.

INCREASED EMPLOYMENT

Detailed statistics of the numbers and composition of its personnel, based on figures which are now regularly compiled and published in the store's employee magazine, indicate that the number of persons employed increased by over 300 during the second stage of its reorganisation. In spite of the prevailing depression, rationalisation did not increase unemployment but rather created new opportunities of work. This was not the case during this period in America.

The tables further indicate that there is regular and constant use of temporary workers in the Globe Stores. This need has been met through a definite plan of stability of employment for the non-permanent employees, who are maintained as a group of trained individuals on call. This plan has proven successful in American stores, particularly those located in cities with less transient population than New York, more comparable perhaps with Zurich.

The average age of the personnel is low, 63% under 30 years of age; and yet there is a marked stability of employment, with 42% over 3 years of service, 24% over 5 years, 12% over 10 years, and 6% over 20 years. Again we have no statistics for comparison. It can be safely said, however, that the average American retailer who discovers that 84% of his personnel has been in his employ for 3 years or more will take drastic steps to inject "new blood."

NO CUSTOMER HUNTING

Unlike many European stores, the Globe Stores now pays a straight salary to all its employees, thus protecting them "against the hazards of the bonus system." The wage policy "is not, however, entirely opposed to the bonus system. Bonuses have been granted in the past for the clearing of marked-down goods, and a system of collective bonuses on sales has also been tried. Generally speaking, however, the policy of the house is to pay a fixed wage in return for regular service to customers rather than to encourage the kind of 'customer hunt' which is the usual consequence of payment on a bonus system and often has unsatisfactory commercial results."

Here, perhaps, is the most vital rationalisation of all. Here is management confident in its ability to lead, to provide incentive to the worker in the form of job satisfaction and not job remuneration. Here is management with sufficient vision to know that it must shoulder uncertainties of income for the individual worker before it can hope for industrial relations acceptable to both supervisor and supervised. One suspects that only through fixed compensation can retail management establish that kind of credit with its employees which can be drawn upon in times of stress. Surely little credit can be built around a "we-pay-you-afterward" plan.

There is in America only one large

department store that has held firmly to the above principles. The mere fact that this store is internationally famous for its service and personnel, is among the most profitable in operation, would seem to be sufficient evidence for other retailers. On the contrary, the few operating on a fixed salary basis before changed to some form of commission compensation during the depression as an expense reduction measure.

In the Globe Stores the wage bill of 1933, the fifth year of rationalisation, was double that of 1927. Its personnel had increased only 25% during the same period. This represents a substantial rise in income to the individual during a period when variations in the cost-of-living index were 138, 138, 140, 130, 126, 112 and 107 (base: June 1914=100).

HOURS AND HOLIDAYS

Legislation provides that Swiss stores may be open from 8 a.m. to 7 p.m. except on Saturdays when 5 p.m. is the closing hour. The staff works a 9-hour day, except on Saturday, and a 52-hour week. There is a 2-hour lunch period, during which the store remains open and gives service through part-time employees and by dividing its regular salespeople into three shifts. A 15 minute relief is allowed each employee during the longer half of the day's work.

Employees are seldom worked overtime, emergencies being covered preferably through the employment of

extras. Usually overtime is returned to the individual through compensatory leave, and food is provided free of charge during extra hours. A Federal Act in 1934 rules that not more than 24 hours' overtime can be made up in any year by compensatory leave, payment being compulsory for time in excess.

It is difficult to compare these hours and overtime regulations with those of American stores. In this country store hours depend upon the city or community, working hours and overtime upon the state regulations.

Annual holidays are granted somewhat more liberally than ours. In the Globe Stores, the employee is given one week after one year's service, two weeks after three years' service, and three weeks after ten years' service. The holiday may be taken, if wished by the employee, partly in summer and partly in winter.

TESTS USED IN SELECTION

Employment is by contract in conformity with Swiss law. The contract calls for a probation period of three months, one month notice of separation during the first year's service and two months in subsequent years. The result is that meticulous care is taken in recruiting personnel, psychological tests being used. During the year 1933, between 70 and 80 employees were promoted to fill vacancies created by voluntary resignations, death, or marriage.

In America, the Social Security Act serves as the first influence toward stabilization of employment. Previous to this, an employee's entrance or exit has been treated casually. The result has been unskilled selection, non-professional interviews, and little or no use of psychological tests. With one notable exception, American stores have not had great success with testing. This may be due to the fact that tests were introduced shortly after the war as the panacea of all employment ills, were found wanting to this extent, and then set aside. There are, however, present fair-weather signs for the return of testing as an integral part of the employment function.

YOUNG EXECUTIVES TRAINED

Training activities of the Globe Stores are based largely upon observation made by the general manager in the United States. The teaching program is carried out by a training director and five training supervisors.

The training of executives is facilitated by the institution of the "Youth Conference," inspired by the American executive training course or training squad. This conference meets every three months, is attended by some 30 employees chosen by the general management because they are "young in spirit." The general manager defines this as follows: "To be young in spirit is to know how to throw off routine, pride and presumption; to look upon life without pre-

conceived notions or prejudice, in joy and freedom; to avoid egoism and too high an opinion of oneself. It means having faith in the future; making mistakes indeed, but never the same ones twice; in short, being full of optimism and the will to progress." This is a new and refreshing yardstick of potentiality. More commonplace are the subjects debated in these conferences. In 1931 the theme was new management methods in department stores; in 1932 the chief topic was the reduction of overhead costs without lowering wages or dismissing staff; while in 1933 the following subjects were debated: profits; price policy; and personnel problems in modern economic life. Compared with the subject content of the typical executive training course in our stores, it would seem that the Youth Conference combines theory and concept with practice.

COMPULSORY JOB INSURANCE

Employees of the Globe Stores are provided with sickness, accident, unemployment and old age pension insurances.

In the canton of Zurich, unemployment insurance is compulsory for all employees between 16 and 60 years of age whose annual earnings do not exceed \$2,000. A pension fund is maintained at a rate of 10% of wages, paid half by employees and half by the firm. Membership is compulsory. The retiring pension

varies between 25%, after 5 years' service, and 50%, after 30 years' service of the annual wage. The retiring age is 60 years, and a maximum pension is \$2,000. In case of death, the pension fund provides a compensation to the heirs of the deceased, regardless of length of service, amounting to one years' wage.

An unusual feature of the Globe Stores' welfare program provides the sick employee, in addition to the benefits of insurance, to sick leave with pay up to 15 days during the first years' service, one month during the second, two months from the third to the tenth, and three months after the tenth year.

Employees' leisure is also a matter of concern to general management. Holiday arrangements in certain rest homes are made for the 5 years' service employee, travelling expense is paid as well as half the cost of room and board. After 10 years of service these benefits are extended to one member of the employee's family.

These are examples of the thoughtful planning given by the Swiss retailer to the matter of industrial relations. An investment of capital in this branch of the business has borne dividends within the short space of five years.

RESISTANCE OVERCOME

The effects of this and similar reforms on the staff and on employee relations can best be told in the words of the Globe Stores' spokesman.

"Any attempt to simplify or reform a state of affairs consolidated by long-established routine and based on compromises of all kinds is bound to give rise to friction, resentment and even resistance, which tactful persuasion may do much to allay or overcome, but which it is sometimes necessary deliberately to override.

"The Globe Stores was no exception to this rule. The period of reorganisation put the psychological tact of those responsible for carrying out the reforms to a severe test. The process of finding the right man and putting him in the right place meant that some workers had to be transferred from places they were not competent to fill to more suitable posts, and in some cases those who had proved incapable of adapting themselves to the new methods had even to be dismissed.

"All these changes demanded great skill in handling people on the part of the management and general staff as well as considerable esprit de corps and self-sacrifice among the employees concerned. Generally speaking, however, a short period of vigorous and determined action was enough to establish the present situation, which is characterized by the meticulous selection of the staff, understanding

of the system, and the harmonious development of the whole complex of functions. By this means an easier atmosphere was created, gradual adjustment was brought about by force of habit, and general satisfaction resulted."

PUPIL CHALLENGES MASTER

It is the opinion of the management of the Globe Stores that the earning of profits, which under a capitalist system is an end in itself, should be subordinated to higher economic and social aims.

In conclusion, one can profitably give thought to this Swiss firm's social policy as defined by its general manager:

- (a) To provide occupation, and consequently a livelihood, for the thousand employees of the firm and for their dependants;
- (b) To be of service to the consumer;
- (c) To provide work for manufacturing undertakings and their workers;
- (d) To earn a return on capital, which forms part of the national income;
- (e) And lastly, in order better to achieve all these objects, to make a profit.

The American retailer has reason to take pride in the contribution he has made to this accomplishment. May the achievements of the pupil challenge the master.

Successful Casualty Salesmen Have
the Same Interests as Life In-
surance and Real Estate Salesman,
and Are Dominant Extroverts.

Testing Salesmen of Casualty Insurance

By MARION A. BILLS
and L. W. WARD

Actna Life Insurance Company, Hartford, Conn.

IN 1932, the Aetna Casualty and Surety Company started a school for the intensive training of their Casualty salesmen. Since that time there have been seven schools a year, each one being of five weeks' duration. The men attending have come at their own expense, and the average number in the school has been thirty. They have varied in age from 20 to 57, in experience from none to 15 years, in education from grammar school to two years training beyond college.

We realized that this was nearly an ideal opportunity for trying out a testing program, which might permit early prediction of success or failure in selling and eventually might be used as an aid in the selection of men not only for training but also for our general field representatives. We looked over the field of tests criti-

cally and finally selected as the best for this purpose, Strong's Interest Analysis which measures the centering of the interest of the individual, and Bernreuter's Personality Inventory which tries to indicate the emotional stability (B₁), self-sufficiency (B₂), extroversion-introversion (B₃), and dominance (B₄), of the individual. The study is still in progress.

In each school the tests are given at the end of the first week. The men are told that the testing is still an experimental procedure, that, however, we will discuss the individual scores with them if they desire, and that the only way of getting any benefit out of the test, either for themselves or ourselves, is by a perfectly honest answering of the questions.

The Interest Analyses are scored

for twenty-five occupations and the Personality Inventory for the four traits. However, a combination score, based on four items only, namely, rating in life insurance and real estate selling, and extroversion and dominance, has seemed to give a rather remarkable predictability of the success of the individual in selling.

TESTS REPEATED AFTER YEAR

In general, instructions seem to have been followed, and the test results correspond fairly well with the individual's opinion of himself. One or two exceptions by their very uniqueness stand out. One very shy college graduate of 20 scored very high on emotional stability, self-sufficiency, extroversion, and dominance. Tactful handling brought out the remark that he was "progressing" in self-confidence and had marked the paper where he was "Progressing to." During the first year we told the individuals that at the end of the year we would again send them a second set of the same blanks to be filled out. We did this for the first six schools. After a study of these, however, we decided that the second tests were not giving us sufficient additional information to be worth the time and effort necessary in obtaining them. However, a study of the consistency of behavior in these tests has seemed to confirm some studies previously made and to add a few new points, and we are therefore reporting on the 96 cases of first and second tests given approximately one year apart. Following

are the correlations between the first and second tests:

<i>Strong Interest Analysis</i>	
Life Insurance72
Real Estate71
All Occupations69
<i>Bernreuter Personality Inventory</i>	
Emotional Stability69
Self Sufficiency63
Extroversion-Introversion71
Dominance72

These correlations, it is interesting to note, are all within a few points of each other, and all indicate a fair predictability from the first test to the second. However, if we study the tests in more detail we find the two types differ radically in reason for the correlation.

The Interest Analysis test was studied by the ordinary five-letter divisions ranging from "A," close centering of interest around the occupation, to "C," no centering of interest around the occupation. As has been noted in previous studies, the Strong Interest Analysis is most repeatable at the two extremes. That is, if a person scored "A" in life insurance selling in the first test, he stands a 91% chance of scoring either "A" or "B+" in the second test, and if he scored "C" in the first test, he stands an 85% chance of scoring either "C" or "B—" in the second test. The predictability for anyone scoring in the "B" group, however, is poor. The fairly good correlation comes from the fact that in life insurance interest, 53 out of 96 people showed either a definite centering of interests within the group or without the group. The same holds for real estate interest. If we throw all of the occupations into

one large chart, plotting the scores against each other, we find again that 91% of those scoring "A" for any occupation in the first test scored an "A" or a "B+" in the second, and 77% of those scoring "C" in any occupation in the first test scored a "C" or a "B—" in the second test. These figures show a remarkable correspondence to those obtained by E. K. Strong, Jr., in his study of 223 seniors from Stanford University. (See *Journal of Educational Psychology*, May 1934.)

SUCCESSFUL MEN PREDICTED

On the Personality Inventory traits the reason for the high correlation is different. For convenience, we transpose our scores so that a high score indicates high emotional stability, high self-sufficiency, extroversion, and dominance. Take, for example, the scores in dominance. We find that of those scoring over 50 in the first test, 95% score over 50 in the second test, while of those scoring below 50 in the first test, 51% scored below in the second test, 49% scoring above. That is, there is excellent predictability from the first to the second test for those scoring above average, but there is no predictability for the people scoring below average. Since in the first test 61 of 96 scored 50 or above in dominance, the correlation is fairly high. The same holds in general for each one of the personality traits.

It seemed of interest to determine whether the people who showed consistency of behavior in interest, also showed it in personality traits, or

whether they seemed to vary independently; that is, whether we have some persons who tend to be consistent throughout, and some persons who tend to be inconsistent throughout. In order to determine this we compared the changes in the first and second tests of each person in their occupational scores in life insurance and real estate interest, with changes in the four personality inventory scores counting a shift from "A" to "B+" as one, "A" to "B" as two, etc., and taking personality changes in steps of 10. All correlations approximated 0, the highest being .18, the lowest -.005, showing that there was no tendency for the person who shifted in personality traits to also shift in interest, and vice versa.

Both age and test-consciousness have been suggested as reasons for the changes in scores. The average age of those varying more than twenty points in any of the Personality Inventory tests, or more than one step in the Interest Analysis, is practically identical with the average age of the entire group, as is also the average previous experience. Letters received have seemed to indicate a lack of test-consciousness and an objectivity of view concerning tests which is almost naïve. For example, when sending in a second set, one man ended the letter by saying, "If these papers tell you that I like selling any better than I did, they are d— liars."

TESTS AND RATINGS

For purposes of studying the predictability for sales we have had the

men rated successful, fair successes, just fair, and failures. The only two of these classes which we believe are fairly definite at the present are those that stand at the extreme—success and failure. Therefore, it seemed well to study these two classes in relation to their shift in interest and personality traits.

In the Strong Interest Analysis, while we have about the same shifting taking place for the successes and failures, if we consider the shift in terms of chances for increases or decreases in score, we find that the successes increased in 25% of the cases where an increase was possible, and that the failures increased in only 5% of the cases where an increase was possible. While the successes decreased in only 4% of the cases where a decrease was possible, the failures decreased in 24% of the cases where a decrease was possible.

The following table gives the changes in personality traits scores of the successes and failures separately:

Changes in Personality Traits: 1st and 2nd tests, in relation to success or failure on job—2- Casualty Salesmen

	SUCCESSSES			FAILURES		
	Avg. Score on 1st test	Avg. Score on 2nd test	Diff. of Average	Avg. Score on 1st test	Avg. Score on 2nd test	Diff. of Average
B1	63.4	71.2	+7.8	56.1	54.8	-1.3
B2	41.2	45.9	+4.7	57.4	54.3	-3.1
B3	64.5	70.5	+6.0	55.7	54.9	-.8
B4	66.2	74.9	+8.7	52.4	54.7	+2.3

It will be seen that the successes tended to increase their scores more than did the failures. This is true although in B1, B3, and B4 the successes had a higher initial score than the failures, and therefore less chance to increase.

CONCLUSIONS

(1) Scores on 96 Casualty salesmen on Strong's Interest Analysis given one year apart, show a predictability for both outstandingly high and low scores, or predictability for those whose interests center definitely around the occupation, or definitely outside of the occupation. For the personality traits, we have predictability for the individual who scores high in emotional stability, self-sufficiency, extroversion, and dominance, but not for those scoring low.

(2) A change in interests does not indicate a change in personality traits or vice versa.

(3) Changes do not vary with age and experience.

(4) Judging from a small number of cases, people succeeding in an occupation tend to change in the direction of the ideal interest and personality traits for that occupation, while persons failing tend to depart further from it.

A Paper Delivered before the Eighth
International Congress on Psychotechnol-
ogy at Prague, Czechoslovakia.

Emotional Factors In Accidents

BY REXFORD B. HERSEY

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FEW people realize that the most difficult phase in accident prevention work lies in affecting the union of mental and emotional attitudes toward safety-first work. Formerly the job of the safety engineer was more difficult because he had both elements to overcome. Not only were the emotional factors present which are my topic in this paper, but the mental attitude toward the deliberately safe worker was to regard him as a weakling and a "softy." Today this mental barrier is almost entirely gone.

Workers now consider safety the fourth most important item in their industrial environment, and at the same time the one best carried out by management.

Why then is it often so hard to get them to coöperate day in and day out

with a safety program? A certain amount of it comes from the opposition which we always offer to anything which reduces our freedom of action. It is similar in many ways to the common reaction against prohibition. There are, however, other more purely emotional factors which are even more directly responsible.

LOW EMOTIONAL STATES

The first emotional influence to be noted is that accidents may result from low physical and emotional vigor. During the last seven years I have studied in this country and Germany more than one hundred workers, using the most approved methods of both clinic and laboratory which were applicable. In each case the study lasted from four months to

a year. Over 500 cases have been studied less intensively. Only one of them experienced a serious accident, and his accident took place outside of the plant. But of the others, out of over four hundred minor accidents, more than half took place when the worker was in a worried, apprehensive, or some other "low" emotional state. This fact becomes very diagnostic when we bring into the comparison the fact that the total group of workers were, emotionally low not more than 20% of the time. This shows that the number of accidents which occurred must have been unduly influenced by the sadness of worry of the individuals.

The foremost evident causes of these low emotional moods were:

- a) Plant worries.
- b) Home difficulties.
- c) Fatigue and lack of sleep.
- d) Periodic emotional disturbances.

One or two illustrations will suffice. A foreman and I were walking through his department. He saw a man standing on a two wheeled cart painting a machine. There was a support under only one end. If he had stepped one foot to his left, this cart would have tripped over. The foreman told him to get a trestle, which he did. Imagine our amazement on returning fifteen minutes later to find him on a ladder which was too short, and which he had placed on a rounded block so that the ladder was apt to slip off at any minute.

The foreman said, "Mike! What in the world is the matter? Look at that block that ladder's on and just after I spoke to you about the cart only ten minutes ago! Do you want to get me in bad?"

"Honest. Boss! I never knowed what I was doin'. My wife tried to commit suicide and I have been worryin' what she's doin' now."

We talked sympathetically for a while and gave him a bit of encouragement before leaving. I observed him carefully without making it obvious most of the rest of the day, but saw no further violation of any rule. A very similar incident was observed in the case of another worker worrying about his demotion and subsequent treatment at the hands of the "gang."

Another man had five accidents in six months, every accident taking place after seven o'clock in the evening. He worked from three to eleven. On investigation we found that he went to school in the morning and was getting no more than four hours sleep, which made him nervous and irritable. He would be all right, however, until he had finished his supper in the evening. A sensible rearrangement of his outside activities has made him a no-accident worker for over two years.

LACK OF SLEEP

The home difficulties and plant worries are perhaps more often given as causes of accidents than lack of

sleep and the periodic emotional fluctuations. It is true that they are more obvious because a person whose mind is on something else besides his work can certainly not observe the factor of safety as carefully as he should. I have certainly no cause to quarrel with the importance of these items. However, worries often prevent the worker from sleeping properly. This is especially true in the case of home worries or sickness in the family which forces him to get up repeatedly during the night. As far as I have been able to see, lack of sleep shows rather little effect on efficiency, because a mere moment of complete relaxation in the washroom or even at the machine, after a person has been up most of the night, may help him to turn refreshed to his work. It is this slight moment of almost enforced relaxation or dozing, however, which may be the very time for a serious accident to occur.

The last point which I mentioned as a cause of low physical and emotional vigor, namely, the periodic emotional fluctuations, is the time when accidents usually occurred to about 40% of the workers studied. Now I should like to explain the subject of periodic emotional fluctuations somewhat fully. Every male worker whom I have studied showed the astounding fact that emotional tone varies not only from time to time during the day, but also, for no accountable reason, seems to exhibit longer recurrent fluctuations. Stress may, however, well be laid, at this point, upon the fact that this theory

does not mean that every person or even any person will suffer a severe case of the "blues" at regular intervals. It means rather that there will be a lowering of a person's emotional resistance and his capacity for integration and response which may for any definite "low" merely mean that he is less happy than during the "highs" both preceding and following. How acute the depression experienced in the "low" may be, depends not only upon the internal condition of the person but also on his relation to his outer environment. These recurrent emotional fluctuations in the workers studied in America averaged about five or six weeks in length, the time span for two men being only three weeks and for another nine weeks. Once the normal or average time span of the workers was discovered, it was observed that the fluctuation of each period around that norm was no more than a week. That is, if a worker's normal emotional time span was seven weeks, circumstances might speed it up to six weeks or retard its development to eight weeks. Observations disclosed that the span of the younger workers was shorter than that of the older married workers.

ACCIDENTS WHEN ELATED

If these "lows," both incidental and periodic, render us less competent to do our work, and at the same time increase our liability to accidents, is it not logical to think that we should

be more able to avoid accidents during the highs? It is true that the positive state of pleasant emotional satisfaction and good physical condition helps to reduce the liability to accidents, but when the elation and physical vigor become too exuberant, as is often the case especially with young workers, not only accidents and their importance, but also the need for security against old age and illness fade into insignificance in the elated worker's mind. At such times it seems as if a superabundance of emotional energy drives the worker to seek satisfaction for his ego by attempting to show his disdain for all restrictions, the safety regulations included. Though the worker and foreman may ordinarily be quite coöperative with the safety regulations and their observance, these moments of high elation, often make the most understanding worker perform some foolish bit of thoughtless action which may cost him a finger or an eye. Roughly about 20% of the observed accidents in the United States occurred when the workers were in such a high state.

Another element which often enters into the worker's behavior during such a vigorous mood is the fact that his good feelings stimulate him to produce at his highest rate of speed. His concentration on output alone makes him less careful than he usually is. Without doubt, the worker who is so engrossed in himself, or in the actual operation which he is performing, that he has no eye for anything else, will prove more

likely to suffer from accidents than will that worker who takes time to consider where he is going, what may be under foot, or what the safety rule is governing that particular job. If the worker rushes himself, or if the foreman "drives" him, the result is the same. The careful worker must either see to it that the conditions of his work are safe by pausing from time to time and devoting conscious attention to all the details of his work, including his safety, or else he must be able to do his work a large extent in an automatic fashion and thus permit his conscious mind to take the factor of safety into consideration as he works.

We have now covered most of the factors which from the emotional standpoint tend to throw a monkey wrench into accident prevention work. I sum them up:

1. The conflict between mental judgment and a deep-down unwillingness to abide by restrictions.
2. The results of low physical and emotional vigor.
3. The contrasting influence of too high spirits.
4. The failure of semi-automatic functioning on the job largely through lack of proper training.
5. Purely outside distraction.

INDIVIDUAL APPROACH

We come now to the methods whereby these emotional factors can be overcome and in part utilized in our accident prevention work. The first approach which I shall use may be termed *the individual approach*, and the second *the collective approach*. Naturally, there is no hard and fast line to be drawn between the two. The individual method is rendered

necessary by the fact that about 50% of the accidents, both lost time and minor accidents, would seem to be caused by 20% of the workers. My studies have confirmed this point of view, though it must be admitted that a comparative study of the various occupations would give different percentages. Dr. C. S. Slocombe of the Personnel Research Federation, stressed the same thing in an article called "It's a Habit." His survey indicated that in a plant of 6,600 employees, there were 900 chronic repeaters. These men were responsible for 60 per cent of the minor accidents and also for 60 per cent of the lost time accidents. Is it not most necessary that any sensible program of accident prevention should concentrate itself on these repeating individuals? The major aim of the program should be to cure these men of their accident tendencies or to transfer them to other departments where they would have little opportunity to injure themselves or others.

It is not to be thought that all of these "repeaters" are emotional misfits. With some it is poor training, lack of intelligence to grasp some of the less obvious parts of their work, or some physical deformity or ailment which unfits them for that particular type of job. In one of the railroad shops where I was working Rufe Smith's job was abolished and in accordance with the seniority rule he "bid in" another job. His technical proficiency was sufficient and he was given the job. He had been on it, however, only two days before it was

obvious by reason of the awkward manner in which he climbed over the engines that he was an accident risk. The foreman sent him to the medical department for examination, but the physician, who likely had sat in his consultation room the last ten years and hardly knew a machine shop from a blacksmith's shop returned him fit for duty. Of course his separate organs were, but operating as a unit they did not constitute a body to climb efficiently over engines. The foreman did his best to restrain him; his buddies tried to look out for him, but inside of two months he had three minor accidents and one lost time accident, in which because of a fall one of the bones in his leg was broken. After that I induced him to "bid in" another job, on which he has worked the last three years with only four minor accidents.

MALADJUSTED INDIVIDUALS

But the emotions do play an important part in the majority of these repeaters' accidents. The man whose emotions are too easily affected, who can be made elated, sad, or angry by the song of a bird, the defeat of his favorite ball team or the joshing remark of a fellow worker is an accident risk. The maladjusted individual who is harboring some grievance relative to either home or plant, or who has some emotional complex that prevents his intelligent grasp of all the factors in his work most of the time is likely to be a "repeater."

One particular truck driver was a

"repeater." On investigation it was found that he was imbued with a superiority complex, to give it a common name. When he got in that big truck he felt every one should give way to him. If it were a question of just squeezing past a red light, he answered it by stepping on the gas. This situation was rectified by a goodly portion of judicious explanation, a dash of humor, and a dab of threatening.

What, however, should be done about the "repeaters?"

1. See to it that means of identifying them are available, either from dispensary records or otherwise.

2. Bring in all who may be interested or helpful to assist in studying the individual: foreman, employment manager, doctor, plant psychiatrist, if there is one, workers' representative, etc.

3. Study each case as a psychiatrist does a patient, looking into every factor in his life; past accidents, medical record, plant and family experience, attitudes toward fellow-workers, company and foreman, working habits, inattention, distractibility, clumsiness, intelligence, emotional stability, etc.

4. Draw conclusion as to probable cause and work out remedial measures with coöperation of all concerned.

So much for the first approach to the study of individual cases.

MASS METHODS

We come now to the collective approach. As it is well known to

you all, I shall only mention some essential points, which have proved their worth in practice:

1. Example on the part of the foremen.
2. Education of both workers and foremen.
3. A technically "safe" plant.
4. Repeated inspection.
5. Careful investigation of each accident to eliminate unsafe practices.
6. The holding of the direct supervision responsible, at least for the explanation of every accident in his department.
7. Persistence yet variation in some technique of keeping safety continuously in the workers' and foremen's minds.

Most important of all is the attitude of the immediate supervisor. He must set an example of real interest in safe practices and at the same time must be on the lookout for violation of the safety code. The worker's emotional opposition to "safety" is often in inverse ratio to the length of time a conscientious safety program has been in operation and the bosses proved interest. The foremen must therefore also understand and take into account the importance of the worker's emotional attitude.

It is, however, not sufficient in safety work to put before both supervisor and worker merely the ideal of benefits to be derived from not having accidents. The mule requires not only the hay before his nose. The whip diplomatically administered is also necessary. From the emotional standpoint it is necessary to set up an emotional urge wherein greater discomfort follows failure to obey safety rules than satisfaction from flaunting them. To make this policy most effective, the direct supervisor must,

therefore, be held responsible not only for accidents incurred by workers under his supervision, but also for infringements of the safety regulations, though such infringements do not lead to actual accidents.

Naturally this utilization of the penalty idea must be made with caution. Otherwise, it will defeat its own end by setting up particularly in the worker's mind an emotional tension which will tend to cause accidents rather than prevent them. If, for instance, the idea gets abroad in a plant that two accidents will cause a man to be fired, the result will be worse instead of better. If, however, in the dim background of the worker's or the supervisor's mind there exists the knowledge that every accident or even every violation of a safety rule will demand discomfort and tedious explanation, the result can only be good. This does not mean that flagrant violation of the rules should not be visited with some punishment, but certainly the threat of discharge should never be made an open and commonly used method of coercion.

REWARDS AND PENALTIES

Let me sum up. Fundamentally there is something in human nature which rebels at the idea of continually being safe. Accidents result largely from a lessening of the power of integration which may come from

either unhappy emotion such as worry and fear, or from too high emotion such as elation and undue exhilaration. These emotions may result from very pleasant happenings, periodic emotional fluctuations, home difficulties, lack of sleep, fatigue, or plant worries. Causes of accidents, only indirectly connected with the emotions, are (1) the worker's failure, through improper training, to function sufficiently automatically on the job to overcome the direct emotional difficulties and (2) distractions—which may even result from too great attention paid to certain parts of the job to the detriment of the safety factors necessary.

Closely connected with these more general emotional factors which apply to most workers come the personality factors which are a part of a man's emotional make-up and which cause the largest percentage of accidents to happen to those workers whom we may call "repeaters."

In attempting to overcome these emotional factors we have two methods of approach, the individual and the collective. No safety work can achieve its ultimate goal unless it uses both of these methods. Safety work must therefore offer to the worker both a reward and a penalty, both of them appearing as a part of a just and well balanced personnel program.

Practical, Constructive Programs for Federal,
State and Local Government Personnel. A
Review of the Publications of the Com-
mission of Inquiry on Public Service Personnel.

Employees of The Government

BY HERMAN FELDMAN

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BEFORE the advent of the New Deal the subject of public personnel administration attracted no general attention for the reason that its problems were the more or less permanent ones of an established organization. In appraising the status of the Civil Service one might have been justified in asserting steady progress, even though it was painfully slow. The activities of the present administration have put the whole subject on the public doorstep because of the sudden large increase in the number of Government employees. For example, in relief administration alone, the United States Government employed, about a year ago, when last I had occasion to inquire about it, a staff of over

186,000 persons. The new agencies of control, the new government units of industrial operation, such as the T. V. A., and the new social services, such as employment aid and social insurance, have all meant a heavy recruiting of public personnel.

For the most part the newer Federal positions were excluded from Civil Service Commission control and the Federal Salary Classification Act. The reason for keeping these positions outside of the Civil Service Act was not, as some suppose, entirely a political move. It was rather that some of these activities were considered temporary and it was desired that the persons employed should consider themselves temporary and not be given a per-

manent status. Such a permanent status would create embarrassing complications and impair the position of the regular employees of the Government with regard to matters of transfer, promotion, and various privileges. It would make it difficult to reduce forces. As a matter of fact, the agencies which had previously been under the control of the Civil Service Commission and governed by the Classification Act were not released from such control; if anything, there has been some increase in the coverage of laws designed to promote genuine civil service procedures.

THREE MILLION GOVERNMENT JOBS

The extension of Federal services and the availability of Federal grants necessarily enforce extensions of state and municipal services. These have grown in spite of the depression. To cite merely on example, while the unemployment insurance act, nationally, has meant no great addition of force as yet, it has had the effect of forcing the states to establish their own unemployment insurance administrations, paid for from funds given to states for the specific purpose of hiring the accountants, field agents and clerks.

Statistics of government employment show that, in 1935, there were about 2,250,000 permanent, full-time employees on State and local payrolls, aside from three quarters of a million on the Federal payrolls, excluding the military forces. The

skepticism of many people concerning the wisdom of this or that measure involving a control or function previously not exercised by the government is often based, not on moralistic or legalistic grounds, but on the doubts of our social capacity to do the job. These doubts are concerned with the likelihood of recruiting the personnel on a merit basis, of containing impartial and competent service once chosen, and of maintaining zeal for civic attainment among administrators comparable with that shown by administrators in private industry. To the extent that such doubts may be changed to pride in the type of person obtained and developed in the Government service, we may see an increased support for social assumption of various obligations and activities; to the degree that the public service creates a stereotype of incompetents chosen on a patronage basis, it builds up resistance to the extension of government even in fields in which public sentiment would otherwise be more favorable.

PROBLEMS STUDIED BY COMMISSION

It was therefore a timely activity, in December, 1933, for a body known as the Commission of Inquiry on Public Service Personnel to be appointed by the Social Science Research Council, for a broad study of the problems of public personnel. Financed by the Spelman Fund, the Commission was able to engage in a varied program

of research. It held hearings in principal cities at which authorities and officials gave first-hand testimony and recommendations; it sponsored special studies on various aspects of the history and administration of the Civil Service here and abroad, and it engaged an expert staff to correlate this information in a series of reports.

The result, in published form, is seen in a series of volumes published by McGraw-Hill Book Company in 1935, which are briefly reviewed here. They constitute a notable collection of material for present-day thinking on the problem of public administration. They do not contain much material that is distinctly new to the specialist, for much of what some of the sections contain or propose is already found in previous, though oftentimes less accessible, studies. The attempt has been rather to bring together existing experience, and the material is combined in eminently readable, informative and convincing form. The special studies will be particularly useful as sources of reference, except for the regrettable omission of indexes in two of the volumes.

FIRST VOLUME OF REPORT

The first volume, called *Better Government Personnel*, contains the summary and major conclusions of the Commission boiled down for quick consumption in a book of 182 pages, of which 84 pages are the regular text and the rest an appendix containing a valuable array of facts and data.

The principal recommendations are summarized in the first few pages, so that no one may miss them. They are a comprehensive selection of the "high spots," and the measures upon which immediate action need be taken. Recommendations are general and specific.

The first recommendation, dealing with the essential point in the whole program, and the second recommendation suggesting the major procedure for obtaining it, are embodied in the following two paragraphs.

A Career Service System should be established in the various governmental units, federal, state, and local, through the enactment and execution of appropriate laws, or through the development of existing personnel or civil service administration.

There should be developed in each of the larger governmental units an agency for personnel administration, to render constructive personnel service instead of devoting its entire attention to the policing of appointments, as has been all too common under civil service. The personnel agency must have adequate powers, staff, and appropriations to maintain and develop the career service system and render personnel service to the operating departments and their responsible officers.

The extent to which the Commission wishes to carry this is indicated in its recommendation No. 5 that:

The career service should extend to all the non-political top positions, including many posts not now covered by civil service in most jurisdictions. The tops of the ladders would thus reach posts of real eminence and honor.

Borrowing on a practice which has helped to make the English Civil Service so distinctive a group, the Commission recommends also that:

Recruitment to each one of the career services should be articulated with the American educational system and with the average age levels of young men and women who have reached the stage of education and develop-

ment fitting them for the lower grades of the various services.

Certification by accredited professional associations and by legally established professional bodies should be made a prerequisite for all professional and technical positions to which this procedure is applicable.

The range of these recommendations covers the chief aspects of sound personnel administration as it has been developed in some of the corporations which have been successful in this regard, and as it has been practiced in certain of the foreign civil services.

SPECIFIC RECOMMENDATIONS

The twelve specific recommendations cover, in the main, some needed reforms long overdue. Their range may be illustrated by the first eight:

1. The immediate repeal of all national, state, or local laws or ordinances, such as the federal "Four Year Law" adopted in 1820, setting a definite term of office for appointive administrative officials.

2. The inclusion of all postmasterships in the civil service system and their recruitment primarily by promotion.

3. The inclusion of federal deputy collectors of internal revenue and marshals in the classified service.

4. The extension of the federal civil service classification to include under the merit system such professional and skilled services of the regular departments as are now excepted.

5. The immediate extension of the federal civil service system to include as far as may be practicable the personnel of the existing federal emergency administrations, boards and agencies.

6. The extension of the merit system under the supervision of the United States Civil Service Commission, wherever practicable, to the personnel of state and local government agencies receiving or expending federal funds, as a condition of the grant, with the power to utilize local civil service agencies which are able and willing to meet standards set by the United States Civil Service Commission.

7. The extension of classification and salary standardization to the federal services outside the District of Columbia.

8. The amendment of veteran preference laws so that they will adequately recognize the war service experience of veterans without conflicting with merit principles or the efficiency of the public service.

One of the most significant of the recommendations is No. 6, because of the lamentable situation which has arisen under various laws providing grants to the States. For example, the Federal Government is now providing general administrative funds to State Unemployment Compensation agencies and others operating under the Social Security Act.

PADDED PAYROLLS

In at least two of the less than a dozen States which have already received such grants for Unemployment Compensation these funds have been used by the states to pad payrolls with men useful in the coming campaign. The practice is as true of the Republican State administrations as of the Democratic, and it has become the most serious difficulty faced in the administration of unemployment insurance. Only such a requirement as that suggested in recommendation No. 6 above could make a real difference. The problem might also be simplified by following the Commission's general recommendation that:

Coöperations should be established between the federal personnel administration and the state and local administrations through such measures as the joint use of eligible lists, the joint preparation and conduct of examinations, and the development of technical studies.

SIX OTHER VOLUMES

The volume, called *Minutes of Evidence*, a stout tome of 721 pages, con-

tains the cream of the testimony given by various authorities concerning the conditions to be found in various localities, states and Federal departments, and the reforms or measures needed to improve them. This survey gives an excellent picture of the various problems of patronage, inefficiency and impaired morale, and a host of constructive suggestions for improvement. It gives a most interesting account of actual practices and will probably be the source book of most general value.

Civil Service Abroad is a book of 275 pages, written by four specialists who are masters of their fields. Professor Leonard D. White, a member of the United States Civil Service Commission writes a first-rate section on the British Civil Service; Charles H. Bland contributes the section on Canada; Professor Walter R. Sharp on France, and Fritz M. Marx on Germany.

Specific aspects of personnel administration are treated in *Problems of the American Public Service*, (431 pp.) by five authors. Professor Carl J. Friedrich discusses certain historical and legal bases of a responsible civil service; William C. Beyer describes the municipal services; Sterling D. Spero analyzes the problem of workers' organizations in the public service; John F. Miller contributes a study of the vexing problem of veteran preference, and Professor George A. Graham attempts comparisons between private and public organizations in their use of the techniques of personnel management.

Professor Harvey Walker has prepared a volume on the special aspect of *Training Public Employees in Great Britain* (213 pp.) which should be of considerable aid in clarifying the value and methods used by a distinguished public service. The final volume, a sort of general treatise, is entitled *Government by Merit*, by Lucius Wilmerding, Jr. It is a presentation of the problem of The American Civil Service as a whole; treated in specific detail, and is particularly valuable in that it describes practical ways of translating intention into actual practice.

The seventh of the Commission's publications is "A Bibliography of Civil Service and Personnel Administration," (143 pages), by Miss Sarah Greer, Librarian of the Institute of Public Administration. This is a well selected list, covering the whole field of personnel administration and of the principal countries of the world. Its interesting format and its selection of significant material, rather than offering an all-inclusive list, makes it extremely helpful to the student of public personnel problems.

Better Government Personnel, 182 pp., \$2.00. *Minutes of Evidence*, 700 pp., \$6.00. *Civil Service Abroad: Great Britain, Canada, France, Germany*, 275 pp., \$3.00. *Problems of the American Public Service*, 425 pp., \$4.00. *Training Public Employees in Great Britain*, 213 pp., \$2.50. *Government by Merit*, 270 pp., \$3.00. *A Bibliography of Civil Service and Personnel Administration*, 143 pp., \$2.00. New York. McGraw-Hill Book Co., Inc. 1935.

Book Reviews

LENGTH OF LIFE

By Dublin, Louis I., and Lotka, A. J. New York: Ronald Press, 1936.
400 pp. \$5.00

Reviewed by P. M. Russell

If a major objective of personnel endeavor is to achieve a more fruitful utilization of human energy (more fruitful in its broadest aspects) then the conservation of such energy must likewise be an important aim. *LENGTH OF LIFE*, by Louis I. Dublin and Alfred J. Lotka, of the Metropolitan Life Insurance Company, is a study of human conservation based on changes in the life table, and measured in terms of the increased life expectancy resulting from a wide variety of magnificent efforts. Personnel men have been identified with many of these efforts, especially in the field of organizing the newer ideas and discoveries into practicable industrial programs. The costs of such work in industry are usually quite definite and measurable; the results have to be expressed all too frequently by terms like "improved morale" or by some measurement like the "reduction in lost-time injuries" which can not evaluate the much more significant long-time advantages to employees who may have been protected against injury. The benefits produced by these programs constitute a real part of the tangible increase in life expectancy

shown in the aggregate by the life tables.

The authors of the above work have long been known for their gifted interpretations of statistical mysteries in terms of human values and *LENGTH OF LIFE*, while unique in its completeness as a technical reference for those who deal with the vital characteristics of large groups of people (and things), is both useful and dramatic in its revelations of what these mysteries mean to the layman. The average length of life in the United States is estimated to have increased about fourteen years in the course of the nineteenth century because of "more healthful living conditions and greater facilities for fighting disease" rather than "any material modification in the inborn characteristics of the human material itself." In the last thirty years, however, there has been a further gain of about thirteen years! Since these gains in the *average* length of life have been accomplished principally through lower mortality of persons under forty years of age, the progress is the more amazing.

Modern personnel administration can hardly claim the credit for the

addition of six full years to the life expectancy of industrial workers at age twenty, which occurred in the period 1911-1931, but there is no doubt that enlightened employers who have been alert to the possibilities of controlling tuberculosis and various other diseases *if discovered in time* have through their vigilance been a real factor in the battle for prolonged life. Better working conditions, more leisure time and persistent efforts to reduce and eliminate occupational hazards have also contributed to the realized improvement in mortality of workers with a consequent betterment in the physical and social conditions of their families.

Doctors Dublin and Lotka, however, present their records of past developments in ways that extend their usefulness on into the future. Diagrams are presented showing the age at death from nine principal causes which might well be studied by personnel men with a view to revised programs of medical examination in order to prevent at least the more serious diseases from reaching a critical stage. The chapter dealing with longevity in relation to occupa-

tion is challenging in that it makes clear the tragic total of fatalities in industry which still leaves a vast field for improvement before we can say that the "human factor" of the worker is alone responsible.

In this brief review, the writer has attempted to indicate the value of LENGTH OF LIFE from a personnel viewpoint. Any narrowed appraisal is an injustice to a study which comprehends in its treatment the full social and economic implications of longer average life. Some conception of the scope of the authors' thinking may be indicated by such chapter headings as: The Life Table as a Record of Progress, Biological Aspects of the Life Table, The Contribution of Medical and Sanitary Science to Human Longevity, Longevity in Relation to Occupation, and Application of the Life Table to Economic Problems. The reader is left with a conviction that here is the evidence justifying all the patient research, sacrifice and persistent labor of individuals and organizations in their efforts to vouchsafe more of life to millions of people. Such conservation is only less heroic than life saving itself.

THE PSYCHOLOGY OF ADJUSTMENT

By Laurance Frederic Shaffer, Ph.D. Boston: Houghton Mifflin, 1936.

pp. xx + 600. \$4.50

Reviewed by R. Brodie Taylor

Chronic faultfinding, the tendency to blame others; worrying and "nervousness"; daydreaming and inatten-

tion; bullying attitudes on the part of supervisors or foremen; dissatisfaction and inefficiency in employees are

frequent causes of lowered production, accidents, absences from work, labor trouble. Personal maladjustments of one type or another are an important and often unrecognized factor in producing these conditions.

For this reason executives and personnel managers should find "The Psychology of Adjustment" a practical aid in the understanding and alleviation of many of their problems.

While this book is designed primarily as a textbook for students, and is not a popular work for casual reading, this fact should not deter the serious general reader who has had no previous psychological training, for the author states in the Preface that the book aims "to assist its readers to understand human nature, rather than to qualify them as practitioners of mental hygiene."

It is divided into four principal sections.

Part I, "Psychological Foundations," based on the findings of controlled experimental research, lays down the general psychological groundwork necessary for the study of human adjustments, and contains a brief but worthwhile discussion of the application of scientific method to problems of conduct.

The "moralistic" attitude to adjustive difficulties, which the author contrasts with the "objective or psychological" attitude, is still so widely prevalent that one is tempted to quote:

"Lecturing, punishment and even reassurance have . . . proved to be notably ineffective ways of dealing

with adjustment problems. The worrier is not cured by being told that he should not worry. The shiftless individual is aided very little by preaching or retribution. What is needed for the successful treatment of these persons is a scientific understanding of human nature."

Part II, "Varieties of Adjustive Behavior," draws upon case research for the interpretation of many types of behavior deviations occurring in everyday life: lying and stealing, egocentrism, seclusiveness, anxiety and worry, occupational psychoneuroses, malingering, "nervous breakdown," and the like.

Part III, "Personality," contains sections on objective methods in personality study and measurement.

Part IV, "Techniques of Mental Hygiene," is a summary of practical methods for the study and treatment of the individual. It includes a case history outline form and a critical comparison of various methods of readjustment.

Following each of the seventeen chapters is a list of readings. These are brought together in a comprehensive bibliography at the end of the volume.

This work has two merits which place it above the ordinary run of publications in the field of personality, clinical psychology and mental hygiene. First, its tone throughout is that of objective science rather than that of popular lore or armchair speculation. Second, it has been planned and written with care, and is therefore highly readable.

CONFERENCE MANUAL FOR TRAINING FOREMEN. By S. M. Shellow and Glenn R. Harmon, Milwaukee Electric Railway and Light Co. New York, Harper & Bros., 1935, 199 pp., \$2.50.

This book combines an analysis of conference techniques for foremen training with a complete syllabus for a course of eighteen conferences.

At this time when so much attention is being paid to the improvement of the quality of foremanship and of the relations of supervisors with workers, this book will supply a long-felt need. It is at the same time a guiding manual for the instructor and a reference study syllabus for the student.

This book has grown out of some years of successful work in the practical conduct of foreman training courses so that the subjects here chosen for study will be found especially useful and readily adaptable for effective use as a text by numerous companies.

THE OFFICE SUPERVISOR. By Henry E. Niles and Mary C. H. Niles. New York: John Wiley & Sons, 1935, 247 pp. \$2.00.

When a person is put in charge of office workers he is seldom told how to handle them, although his own progress and that of his company depend upon his successful supervision and leadership. He may have some ideas of his new duties—of certain things he will do, and of others he will never do. Seldom does he get the benefit of the past successes and

failures of any large group of persons who have faced similar problems. This book makes such experience available. It is based largely upon nine series of discussion meetings of men and women who supervise the work of others.

This is an elementary book for the "office supervisor," or the person responsible for a group of clerks, and for the work they carry on, regardless of the rank or title that he may hold. The pronoun "you" is sometimes used instead of "the supervisor" or "one" to give directness and emphasis. Technical material is avoided, but some advanced books are referred to in the bibliography. The student of management problems will find little new in this book. It is designed to give the present or prospective supervisor a general and comprehensive view of what is required of him. Persons high up in the supervisory ladder may be particularly interested in some chapters, although the problems of the higher executives are not dealt with directly.

BUSINESS OFFICES. By G. L. Harris. New York: Harper & Bros., 1935, 238 pp., \$2.50.

Relatively few office workers become department heads, sales managers, production managers, personnel directors, or comptrollers. Yet most books on business administration are written with the apparent intention of preparing those who read them for such positions.

This book has been written to furnish both the general and the specific

knowledge needed by the young or inexperienced office worker or student. It is elementary enough to appeal to those without business experience, and yet is complete enough to appeal also to those already employed in the business world who want a thorough understanding of business office organization and practice.

Each departmental office of a business concern is considered, its functions explained, the records which must be kept described, the procedures followed outlined, the available positions discussed, and the relation to other departments of the business made clear. The machines and special equipment which are used in modern offices are also described and explained in detail.

The procedures followed in the offices of various businesses, such as wholesale houses, factories, department stores, and public utilities, are explained to show their fundamental similarity and at the same time to make clear the way in which they differ in order to meet the demands of the particular business.

CONTEMPT OF COURT IN LABOR INJUNCTION CASES. By C. E. Swayzee. New York: Columbia University Press, 1935, 145 pp. \$2.25.

During the last half century both the use of injunctions in labor disputes and summary punishment for injunction violation have provoked an ever increasing amount of criticism, not only from the ranks of organized labor but from lawyers and scholars. Much of this criticism,

however, has been the result of prejudice rather than of research.

This monograph is based upon a detailed analysis of over one hundred labor-contempt actions which have resulted from alleged violation of labor injunctions issuing out of the New York courts. It represents an attempt to discover a factual basis upon which suggestions for reform may be made.

THE PROBLEM OF NOISE. By F. C. Bartlett. University Press; New York, The Macmillan Company. January 1935. 16 mo., 87 pp. \$1.25. Reviewed by John H. R. Arms.

Recent studies of effects of noise, measured by actual output in industry, and the growing public noise consciousness, have established a case against noise to the extent that legislation has been passed in many places for its elimination. Notwithstanding, Professor Bartlett's book minimizes the effects of noise on the human system and cites experiments by Laird, Vernon, Fryer and himself to prove his case. He states that noise disturbs principally those persons who are tired or bored, so that their attention is easily diverted from mental tasks; and that objection to noise may be traced to remote experiences; that complaint against noise is often a sign of a deeper social distress.

Such great progress is being made in the measurement of noise and its ill effects that it is difficult to believe that Professor Bartlett would today agree with the conclusions of his own

book. In summary, he concedes the value of "ear defenders" for craftsmen in heavy noise; greater thought by those responsible for personal noise; and greater care in design of structures and machines. He considers persons who object to noise as psychological problems who must be dealt with by other measures. Therefore Professor Bartlett consigns the entire noise problem to a survival of the perfect man who can grin and bear it.

INDIVIDUALIZING EDUCATION. By J. E. Walters, Ph.D. New York. John Wiley and Sons, Inc., 278 + xvi pp. Reviewed by S. S. Brooks.

In response to a recognition of the fact that since "the character of society is determined by the characteristics of its individual members, the job of education is to develop each of those individuals into the most intelligent, able, healthy and reliable person he is capable of becoming." The guidance movement in schools and colleges aims to accomplish this.

Although this book deals, for the most part, with college personnel procedure, a few typical guidance programs for the elementary and high schools are presented. It covers all the essential features of a complete and effective guidance program of all college students. The content falls naturally into three divisions. Part I deals with Decentralized Personnel Procedures, Part II with the centralized Personnel Department or Guidance Bureau, and Part III with Personnel Methods or the tools and

processes by means of which effective guidance is accomplished.

The author holds that there can be no effective guidance without an organized central Personnel Service or Guidance Bureau, and that the best means of individualizing education is through such a central expert personnel service, combined and coordinated with the decentralized counselling system as described. Several examples are presented of organization charts for guidance activities in both high schools and colleges, also of Personnel Record Forms and Rating Scales. The testing program is adequately stressed and Vocational Guidance and Placement are not neglected. On the whole it seems to be one of the most practically helpful books in its field.

EMPLOYMENT RESEARCH. By Leonard C. Marsh. Toronto: Oxford University Press, 1935, 344 pp. \$3.00.

This book has been written as an introduction to the programme of research embarked upon by the social science departments of McGill University in 1931. In that year a five-year grant made by the Rockefeller Foundation rendered possible a considerable extension of social science research, and the decision was made to begin by concentrating the work upon one central subject, namely, problems of employment and unemployment. The studies were planned to have special reference to Canadian conditions and also to give detailed attention to the region centering in Montreal.

News

STEVENS CAMP CONFERENCE

The Sixth Annual Economics Conference for Engineers will be held at the Stevens Institute of Technology Camp during the week beginning June 28, 1936, concurrently with a summer session sponsored by the Society for the Promotion of Engineering Education on the study of economics in engineering colleges.

Members of the Conference will be welcome at any of the lectures arranged for the S.P.E.E. summer session. In particular it is expected that both groups will participate in the evening lectures and discussions. These include Professor Westerfield of Yale on *Money*; Norman Thomas on *The Engineer and the New Society*; Professor Leo Wolman of Columbia on *Labor Relations*; Professor Whitehead of Harvard on *Human Relations in Industry*; Harold G. Moulton, President of the Brookings Institution, on *Economics and Engineering*; William McClellan, President of the Potomac Light and Power Company of Washington, D. C., on *After All, It is an Engineering Course*; and President Davis of Stevens on *After All, Engineers Have to be Human Begins*.

Four courses are proposed for the 1936 Condensed Summer Semester, Monday June 29th to Sunday July 5th, inclusive, namely: Economic Theory, Production Management, Industrial Psychology and Engineering

Economy. The Conference is to be held at the Stevens Engineering Camp, at Johnsonburg, in the hill country of northern New Jersey. There are twenty dormitory cabins scattered through the woods, a mess hall, at one end of which is the big fireplace around which evening conferences are held, and several instruction and service buildings. Three athletic fields and the lake offer facilities for land and water sports. Blair Academy at Blairstown extends guest privileges for golf and tennis. Enrollment should be by letter addressed to President Harvey N. Davis, Stevens Institute of Technology, Hoboken, N. J. Members of the Conference are urged to enroll as early as possible.

CALIFORNIA PERSONNEL ASSOCIATION

The following brief report of the 1935 meetings of the Personnel Officers Association of California has been prepared by the Secretary, Mr. Everett Van Every, Bureau of Occupations, University of California, Berkeley, California.

March 19, 1935. Attendance 22. Miss E. Louise Jolly of the Alameda High School discussed the trends in unemployment insurance. (None seemed to know that the California Unemployment Reserves Act had already been passed by the State Legislature!)

April 16, 1935. Attendance 40. Dick Carlson, Personnel Officer of the Farm Credit Administration and a personnel consultant, discussed governmental policies and standard employment practices of the day. A spokesman for the Department of Labor gave a brief report on the labor elections then being conducted at the Chevrolet Motor Company in Oakland.

May 28, 1935. Attendance 44. Miss Dorothy Williams, Assistant US District Attorney, addressed a joint session with the San Francisco, Employment Managers Association telling of "coming events" in social insurance and social security legislation. Miss Williams' remarks on pending legislation in the field of employer-employee relations seemed unalarming at the time; but an interesting contrast with our November meeting when still unsuspecting employers heard the screech of the tax axe on their payrolls to support just such legislation.

August 27, 1935. Attendance 40. Mr. Robert A. White conducted one of the most successful meetings of the year on "Interviewing Practices." An active panel engaged in exchanging various phases of recruiting, appraising and adjusting workers.

September 17, 1935. Attendance 42. Mr. William Brownrigg, Executive Officer of the State Personnel Board and a man with a wealth of experience in both private and public personnel fields, brought a message of the Public Service and made an ad-

mirable comparison with the practices in private industry.

October 29, 1935. Attendance 45. Professor E. K. Strong, Jr., Stanford University, discussed vocational interest tests and how such tests have been used to determine vocational aptitudes in Education and Industry.

November 19, 1935. Attendance 64. Mr. David Swaney, Prentice-Hall Company, described the Social Security Bill and the California Unemployment Reserves Act in terms (taxes) that were very clear. He described how a one per cent tax on payrolls of employers of eight or more persons goes into effect January 1, 1936, to finance unemployment insurance, with one per cent added each year until 3 per cent is reached in 1938. The contributory old age pension program ultimately will be financed by a 3 per cent tax on payrolls and 3 per cent on employees' wages.

December 17, 1935. Attendance 43. Mr. Milton Rygh, Editor of the California Credit Union News and a member of the Bar of California, told how credit unions operate, their effect on good personnel administration and accounted for their tremendous growth at the rate of 300 per month.

CARE OF PENNSYLVANIA JOBLESS

Extracts from Third Annual Report of the Executive Director, Pennsylvania State Emergency Relief Board.

Automatic Reinstatement. Pennsylvania's relief population, which at its peak included every fifth person in the Commonwealth, has never been

static. Each month thousands of persons leave the relief rolls because of increased earnings, reemployment and miscellaneous reasons, while other thousands who have lost jobs and finally exhausted their resources are added to the rolls. Before March, 1935, however, one of the most perplexing problems confronting the Relief Administration was that of the direct relief recipient who, while desiring a job, hesitated to accept private employment for fear that its possible short duration might force his family to face insecurity and privation pending reinvestigation and reinstatement on relief.

To reduce this problem to a minimum, the Relief Administration, early in March, put into operation a system of automatic reinstatement whereby a relief recipient who accepts private employment may obtain a certificate insuring his prompt return to relief when and if the job ends.

Briefly, automatic reinstatement permits the immediate granting of a relief order pending reinvestigation of the case. The certificate, issued by the relief investigator at the request of the recipient who has been offered a job, is filled in by the employer who certifies as to the duration of the work and the wages paid.

It is significant that of the more than twenty thousand automatic reinstatement certificates issued in 1935, only about one-fourth have been returned. Numerous communications give further evidence of the success of the plan, which has won wide-

spread approval from employers, relief recipients and local relief administrations.

Employment Office Registration of Relief Recipients. Pennsylvania's system of State and federal employment services is an important mechanism in the transfer of unemployed workers from relief rolls to pay rolls, both private and governmental. Although all employable heads of relief households were encouraged to register at employment offices from the date of their establishment, it was not until June, 1935, that registration and classification for employment became a condition of unemployment relief eligibility.

Merit System. While the Relief Administration does not operate under any civil service law, the fixed policy, supported by the State Board, of hiring, retaining and promoting staff members entirely on the basis of ability has resulted in most of the benefits of civil service and at the same time has made possible a flexibility in personnel management which was necessary in the face of rapidly changing conditions.

An important gain during 1935 was the adoption of a classification and salary rating of all employes in accordance with the recommendations of an impartial and authoritative study conducted in 1934 at the request of the State Emergency Relief Board. This classification was completed by April 1.

Other developments of the year include the standardization of tests to be used in the evaluation of clerical

and investigating staffs and the conducting of personnel audits—roughly comparable to inventories—to provide up-to-date analyses of the duties and requirements of every type of position.

PURDUE GRADUATES

Where They Go and What They Do

A study was undertaken for the purpose of obtaining data concerning the occupational opportunities and the economic status of recent graduates of Purdue University.

10.7% of the members of the class of 1934 and 19.8% of the members of the class of 1935 obtained their first employment before graduation; 30% of the class of 1934 and 24.3% of the class of 1935, within two weeks after graduation; and 34.7% of the class of 1934 and 32.2% of the class of 1935, between two weeks and three months after graduation. In other words, 75.4% of the class of 1934 and 79.4% of the class of 1935 found employment before the end of three months after graduation.

Answers to the question, "How did you get your first job?" Personal contact or visit to company, personal friends, letter of application, and professors, were rated as the four most important factors in obtaining employment for graduates.

In the autumn of 1935 when this information was collected, 92.6% of the entire group under consideration were employed, 88.8% gainfully, and 3.8% represented by 17 housewives and 37 graduate students.

More than two thirds of those gainfully employed are engaged in occupations for which they were specifically trained by the University. Over two thirds of the group considered their employment to be of a permanent nature.

The following table shows the salary trend:

		From the Studies Made in the Autumn of							
		1934				1935			
Class of		1928	1929	1930	1931	1932	1934	1935	
Average beginning annual salary		\$7.45	\$11.1	\$10.00	\$12.55	\$10.00	\$11.16	\$11.51	\$12.11
Average annual salary when survey was made		1923	1764	1700	1500	1415	1360	1350	1344

The results of this study, indicate an increased beginning salary, an upward trend in the difference between the beginning and the present annual salaries for the more recent graduates, and a shortening of the time necessary to obtain employment, and sound a note of encouragement for the future of those American youth now being trained in our institutions of higher learning.

MARKET RESEARCH

The 25th anniversary of the founding of the first commercial marketing research department of any company or organization in this country will be commemorated by a dinner given by the Philadelphia section of the American Marketing Society on Friday evening, June 5th, at the Benjamin Franklin Hotel, Philadelphia.

Subjects of contemporary importance to all interested in sound personnel administration, harmonious labor relations and profitable management.

Federation Conference Program

BY CHARLES S. SLOCOMBE

Personnel Research Federation

THE Sixteenth Annual Conference of the Personnel Research Federation will be held in New York, on Wednesday, Thursday and Friday, December 2, 3 and 4, 1936, at the Hotel Pennsylvania and the Engineering Societies Building.

Some sessions are being arranged jointly by the Personnel Research Federation, and the American Society of Mechanical Engineers, and the Society for the Advancement of Management (formerly Taylor Society and Society of Industrial Engineers). These societies also are holding their annual meetings in New York during the first week in December.

Preliminary program arrangements are being made to include sessions on the following subjects:

WEDNESDAY, DECEMBER 2, 1936

1. **Employee Adjustments.** In one company labor organizers are shrewdly making headway by concentrating on individual workers with real or imagined troubles in their work situations. Psychiatrists and those using psychiatric methods will tell what they have found during 1936 as basic causes of employee attitudes, and what they consider can be done about it.

2. **Office Personnel Administration.** Modern office machinery is creating problems relating to real or imagined fatigue, more costly accidents, proper

standards of work, methods of payment, etc. The solution of some of these problems will be attempted.

3. **Wage and Salary Administration.** Complaints of individual employees, about the unfairness of their pay, continue to make wage and salary administration an important subject. A session will bring out the latest ideas on this subject.

4. **New Methods of Industrial Psychologists.** New methods for hiring and training workers, developed during 1936, will be discussed in a joint session of the Personnel Research Federation and the Psychological Corporation.

THURSDAY, DECEMBER 3, 1936

5. **Organized for Harmony.** Production men, rate setters and personnel men all deal with workers in maintaining discipline, production schedules, quality, budgets; in setting standards of performance, and wage rates; and in selection, training, rating and collective bargaining. A general works manager, a ranking supervisor, a time study man, and a personnel man will discuss the best organization and methods for correlating their work and maintaining harmony in industrial relations. (Joint session of Personnel Research Federation, American Society of Mechanical Engineers and Society for the Advancement of Management.)

6. **Training for Management.** How many humanistic subjects, such as economics, sociology, industrial relations, etc., are desirable for those training for managerial positions in Engineering Colleges? What is the best preparation for those desiring to enter the personnel profession? (Joint luncheon, Personnel Research Federation and S. A. M.)

7. **Training Skilled Workers.** In order to hold their workers, during reduced production while tooling up for 1937 models, the Pontiac Company recently took the unprecedented step of paying partial wages during idleness. This indicates the seriousness of the shortage of skilled and semiskilled workers. Best methods for dealing with this situation will be the subject at a joint session of the Personnel Research Federation, American Society of Mechanical Engineers and Society for the Advancement of Management.

FRIDAY, DECEMBER 4, 1936

8. **What Employees Want.** At a recent joint meeting with employee representatives, they demanded a 20% wage increase, plus bonus, a 30 hour week, and the right to elect their foreman. This was just after the company

had distributed a million dollar bonus. A session will discuss what workers want, why, and what to do about it.

9. **Profit Sharing.** In order to help raise consumer purchasing power many companies are sharing profits with employees, some by formal plans such as those of Eastman Kodak and Westinghouse, others by making distributions of varying amounts at irregular intervals, as business warrants. The advantages and disadvantages of profit sharing, and methods of distribution will be discussed at a Joint luncheon session. (Personnel Research Federation and S. A. M.)

10. **Lower Prices or Higher Wages.** The Brookings Institution strongly recommended lowering prices rather than raising wages or sharing profits. Few companies are following this recommendation. Executives say they agree with Brookings, but do not see what more can be done. A joint session will explore ways and means of reducing prices of manufactured goods to increase consumer demand. (Personnel Research Federation and S. A. M.)

11. **Social Responsibilities of Business and Industry.** Private business and industry have three responsibilities; (1) to produce more and at less cost than would be distributed under some other social system, (2) to do so in such a way that employees have reasonable opportunities for development of themselves and their families, (3) to use profits in ways that do not lead to interruptions in progress. This subject will be considered at the concluding banquet. (Personnel Research Federation and S. A. M.)

Note: The Sixteenth Annual Conference of the Personnel Research Federation is open to all those interested. Members of the Federation are invited to attend, without payment of Registration fees. Non-members pay a small fee upon registration at the Conference.

President Roosevelt Sent a Delegation to Study Sweden, where They Break Giant Monopolies. The Federation's Representative also made a Brief Study and Reports First Impressions.

Candid Camera Snaps *of* Sweden

By FOREIGN CORRESPONDENT

WE ARRIVED in Gothenburg Wednesday morning on schedule time but the ship was delayed a day so that we did not get out until 4:30 this afternoon.

These Swedes are great people. This being a near Socialist country it is rather interesting to see how the system works first hand. Just to give you some idea of it—the workmen come to work at 7:00, knock off for breakfast at 9:00, work a little more, knock off at 11:30 for lunch and come back afterwards for a few hours more work. They'd make excellent WPA workers—in fact we decided they are training for WPA work in the U. S. A. They decided at 6:00 last night that they wouldn't work in the evening so that tied the boat up. All their work is done at about that tempo.

When we drove into the country this morning, we saw lots of women working in the fields, but only two men, and they were just standing holding a hoe—probably waiting for the women to come out.

The two most noticeable characteristics about the place are the extreme cleanliness, and the extreme stolidness of the people. The slums look like New England cottages. The street cars which are light blue and white are spotless and have white curtains at the windows. There just simply isn't any refuse on the streets—what they do with garbage and refuse I can't imagine.

Another thing about the streets that is surprising is the total absence of the small automobiles that you see all over England and Europe. Nearly all the autos are American. In fact

fields and streets in many respects are the most American thing I have ever seen outside of America. This, of course, needs a lot of qualification as the pavements are cobblestones, the houses are most distinctive and there are canals and rivers everywhere.

I believe there are more boats than bicycles and that is saying a lot. The canals and rivers are lined with small boats, both launches and sail boats. The river here is very wide and full of ocean craft. The Swedish Navy happened to be in and it was quite a sight, also beautiful passenger and freight boats. Many of them are blue and white, and against the blue sky with the clear bright sun and sparkling water their straight lines and excellent proportions make the harbor a beautiful sight.

We had riveting all night long as we were literally sleeping in a shipyard. It was just like New York and the subway. They were going over a whaler next to us. It's just getting ready to start out on a 3 years cruise. Does it make you feel like a landlubber. They go to the Antarctic and will, of course, go by New Zealand.

We saw many of the coöperative apartment houses but did not go inside any of them. They point to the most modest house where a family lives by itself as the home of a rich man. Isn't it human nature to regard the individualist in a Socialist country with envy and awe. There are literally no very rich and no very poor. Every man may be a king, but

they don't seem very enthusiastic about it.

I have never seen such solemnity and stolidity. In two days we have only seen one person smile. Last night a group of us went in to an amusement park here, the Liseberg. It was as quiet as a church. No smiles, no laughter, no noise of any kind. In fact we were stared at like wild animals though we were anything but hilarious. These amusement parks are apparently an integral part of the life of Scandinavia. They are known as tivolis.

However, this park last night was a very novel and interesting experience. Nothing like any you have ever seen. Spotless, of course, with adorable rows of flowers and flower boxes all over the place. But the buildings and stands were simply beautiful. The main color scheme was pink and white and the most prominent side color a grass green. You can imagine the quaint effect. With colored lights, flowers and a few stripes of paint in which they put just a little purple blue. It looked like a Hans Anderson fairy tale gingerbread house and city. Even the acrobats (leads from Ringling Bros.) were dressed in pink tights and spangles. All the lights both in the grounds and in the buildings were indirect. The roller Coaster was most modernistic with delightful paintings.

Can you imagine the solemn Swedes against this background. It was the most incongruous sight I have

ever seen. How can a people use such beautiful soft lovely colors in everything, have such droll subtle paintings, and be as wooden as lamp-posts.

We paid 50 ores to get in (about 13¢) (children were only half this) and saw the varieties and wandered all over the place. Of course, the side shows, cafes, and dances were a little each time. But I think we were the only ones who spent any money beyond the 50 ores. At one dance place, they were doing some kind of a Swedish dance, that is the funniest jig. Were they serious about it?

However, at another and bigger dance hall they had an American orchestra, the younger people were dancing and they were excellent dancers. The girls are rarely pretty, but they have straight strong bodies and clear eyes and open faces. They do not dress well on the streets but I have seen a few who were more well to do and dressed very well—in a rather English way. This is definitely a man's country, just like England.

They have some very beautiful parks and they are used by the people quite a lot. There are a lot of churches—all Protestant. And many museums.

Swedish people are very honest, go out of their way to be nice to you and undercharge rather than overcharge. But they are painfully non-

chalant where an American would rush up with the soft soap. In a restaurant they scarcely notice you. In fact the first one we went into was a very high hat one and they were so funny about things that we were insulted and went out. It has been quite a joke between us. We discovered it was the meeting place of the town life—the Rotary Club—the Royal Bachelor's Club, etc. By the way, there simply aren't any good looking men.

Today when we discovered we were to be in port until this afternoon, we took a bus out to a little town and had lunch in a roadhouse by the Gota Canal. It was delightful. A little like Marblehead, Mass. They do not serve food outdoors but we had coffee, and Swedish punch. While we were there, a girl came out and started fishing from a little balcony, near one of the tables. One of the guests (there were two men at a table) soon got up, went in for a fishing line and then there they both were peacefully fishing. What a life. That was certainly the picture of serenity and peace. We decided that perhaps Socialism wasn't so bad after all.

We walked around the village and found it very interesting with modernistic doorways on little parsonages. These people have the most marvelous sense of line and proportion, and seem to be just naturally modernistic.

The "Hard Directions Test" as a Pre-determiner of Ability to Learn to be Packers and Checkers in a Department Store.

Testing *before* Training

By RICHARD C. CORRIS
Marshall Field and Company
Chicago, Ill.

CAN training costs be cut and the products of training be guaranteed to be higher than average? We think so.

If means exist to show in advance that certain individuals will probably not be able to apply the training given them, why should a corporation not restrict its training to those who can assimilate a sufficient amount to perform properly?

Do such means exist? We believe we have discovered a way in one specific instance.

TRAINING PROGRAM

During the pre-Christmas season a large department store organized a four day training program for men and women who were being hired to be merchandise packers and checkers. The salescheck system of the store is

highly complicated. The checkers inspect the checks for over thirty different points; the packers reinspect for several points and then dispose of the check in several different ways, depending on the type of transaction.

Our training consisted of showing the training classes a series of correct checks on a motion picture screen. The checks were thoroughly explained and questions and discussion were encouraged. Then a series of incorrect checks embracing common errors was thrown on the screen and members of the classes were asked to indicate, on paper, what was wrong on each incorrect check.

TESTING PROGRAM

In connection with this training, we ran an experiment to see if a brief

test, known as the "Hard Directions Test", would serve as a pre-determiner of ability to catch on to our instructions. This test was a set of directions and three minutes were allowed for its completion. Since

For the one hundred sixty nine packers who attended any class between the second and fourteenth group, the coefficient of correlation was $-.44$. This figure indicates that, generally speaking, the higher the score on the

HARD DIRECTIONS TEST

(Time allowed, 3 minutes)

With your pencil make a dot over any one of these letters F G H I J, and a comma after the longest of these three words, boy, mother, girl. Then, if Christmas comes in March, make a cross right here.....but if not, pass along to the next question, and tell where the sun rises..... If you believe that Edison discovered America, cross out what you just wrote, but if it was some one else, put in a number to complete this sentence: "A horse has.....feet." Write yes no matter whether China is in Africa or notand then give a wrong answer to this question: "How many days are there in a week?" Write any letter except g just after this comma, and then write no if 2 times 5 are 10..... Now, if Tuesday comes after Monday, make two crosses here.....but if not, make a circle here.....or else make a square here..... Be sure to make three crosses between these two names of boys: George.....Henry. Notice those two numbers 3, 5. If iron is heavier than water, write the larger number here.....but if iron is lighter write the smaller number here..... Show by a cross when the nights are longer: in summer.....in winter Give the correct answer to this question: "Does water run uphill?".....and repeat your answer here..... Do nothing here (.....) unless you skipped the preceding question, but write the first letter of your first name at the left end of this dotted line.

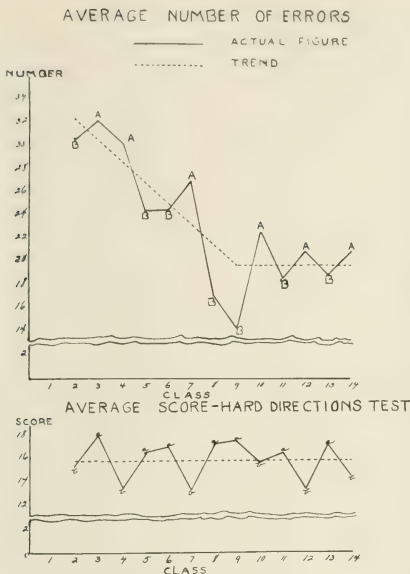
.....

all our classes from the second through the fourteenth group met for the same number of days, and were given precisely the same problems, there was a sufficient element of control to permit comparison.

We may raise the question, "What relation is there between ability to perform this 'Hard Directions Test' and ability to discover mistakes on saleschecks following instruction?"

"Hard Directions Test", the fewer number of errors made in inspecting problem saleschecks.

Two other factors also tend to indicate that there was a high degree of relationship; our increasing efficiency in instruction as time went on, and our increasing stress on points that would be brought out in examination. Reflection reveals that these factors should be considered.



The accompanying charts indicate the existence of these two factors, and demonstrates visually the relationship of the two variables. In the upper graph, is shown the average number of errors made by each class in inspecting saleschecks. The dotted trend line reveals the general downward tendency, that is the improvement obtained in training. The lower graph indicates the average score for each class on the "Hard

Directions Test". The trend line here is horizontal. In other words, while the average score on the "Hard Directions Test" remains about the same through time, the average number of errors made tends to reduce for each succeeding class.

GOOD CLASS MAKES FEW ERRORS

The relationship of the variables to each other, is also visible on inspection. The score of each class

in errors is marked "A" or "B" according to whether it is above or below the error trend line. Similarly the score on the Directions Test is marked "a" or "b" according to whether it is above or below the trend line. If there is a relationship we should expect to find that a class with an above average score in the test (A) would have a below average number of errors (B), and vice versa. This is actually what we find with eleven out of thirteen classes; as may be seen from the table below:

<i>Class</i>	<i>Errors</i>	<i>Test Score</i>
2	Below	Below
3	Above	Above
4	Above	Below
5	Below	Above
6	Below	Above
7	Above	Below
8	Below	Above
9	Below	Above
10	Above	Below
11	Below	Above
12	Above	Below
13	Below	Above
14	Above	Below

Still another factor to be considered in contemplating mathematical or chartered results is this:

approximately fifteen people with extremely low scores were dropped from these classes at the end of one or two days because they demonstrated a complete lack of ability to catch any errors or incorrect saleschecks.

And so, if the increased proficiency in instructing could be evaluated and if those dropped had been allowed to continue for the full four days, the mathematical technique would reveal a much higher relationship. Now that this test has been "validated" it can be used on subsequent groups as a basis for deciding who shall be trained for positions.

It is true in some instances when this test is used as a pre-determiner a person worth while will be excluded, and an unsatisfactory person will be trained. But the large majority of those turned down will definitely be in the unsatisfactory class, and the large majority of those who are trained will be satisfactory. Those who are permitted to go into training, on the basis of the test, will be much better than a class organized without the test as a basis.

Human Frailties, Foibles, and Vicissitudes of Individual Workers Cannot be Ignored if Frictions are to be Avoided.

Psychiatry *in* Industry

By LYDIA G. GIBERSON, M.D.

Metropolitan Life Insurance Company
New York, N. Y.

WHILE the history of psychiatry in industry is a relatively short one—post dating the World War—its place and practical value, are well worth the scrutiny of the personnel worker, particularly since the aims of personnel work and psychiatry have converged rapidly within the past few years. It is possible, without discussing the technical aspects of psychiatry to point out the day-to-day value of the psychiatrist to personnel work in helping maintain efficiency and increased morale.

It is interesting to note in this connection, that industrial psychiatry really received its first impetus during the war when hundreds of thousands of individuals were thrown together indiscriminately in an attempt to weld them into a working mass—a

problem reasonably comparable to that of large industries. The problem is comparable in the sense that no matter how large the mass, the individual is still of paramount importance in his adjustment to the whole, if complete integration is to be achieved.

20% PROBLEM CASES

Valuable research data during the war contributed by the late Dr. Thomas Salmon, Dr. C. Macfie Campbell, now director of the Boston Psychopathic Hospital, and other prominent psychiatrists, pointed the way largely to constructive work in large civilian groups. They found for instance that to place a rifle in a man's hands and dress him in a khaki uniform did not necessarily make him a fighter. Far from it. For many it

simply induced terror. But such men were often ferreted out and put to useful auxiliary work which had little to do with shot and shell.

Similarly in industry the problem of finding the proper niche has become increasingly important, particularly in view of the fact that about twelve to twenty per cent of employees in large organizations have been found to be "problem cases," i.e. they diverge in some manner from intellectual and emotional norm. It is significant that in Europe, where chaotic post-war conditions demanded a more highly concentrated industrialism, that psychiatry leaped to the fore proportionately in much higher degree than in this country, where the need was less urgent. Intensive efforts have been made to correlate the workers, not only physically, but emotionally to their work. To this end, several psychiatric congresses were held for the comparison of methods, at which comprehensive reports were made.

The pioneers in industrial psychiatry in this country were Dr. Elmer E. Southard, who in 1917-1918 helped greatly to interest the Engineering Foundation in the possibilities of a psychiatric approach through industry, and Dr. C. C. Burlingame, who conducted exhaustive research for the Cheney Silk Company in 1919-1920. The results of their work emphasized still further the need for additional effort among industries. But it remained for the Metropolitan Life Insurance Company in 1922 to blaze the trail by employing a full time

psychiatrist to tackle the problem from a strictly company standpoint. Dr. Augusta Scott was engaged at that time and during her tenure of office (1922-1926) laid a sound foundation on which the work is now being carried on. She was succeeded by Dr. Anne T. Bingham who continued the work until her death in 1932. Dr. Victor V. Anderson carried on psychiatric work for R. H. Macy & Company from 1924 to 1930 on a full time basis.

NERVOUS BREAKDOWNS

As the field expanded the employees dealt with were naturally grouped into four divisions, those suffering with:

1. Organic neurological conditions such as sleeping sickness, brain tumors, epilepsy, syphilis of the central nervous system, cerebral accidents or so-called "strokes," etc.

2. Frank psychoses seen chiefly as depressions, manic states and dementia praecox reactions as shown by delusions, hallucinations, etc.

3. Nervous breakdown technically called psychoneuroses.

4. Maladjustments.

It is in the last two groups that the personnel worker is most naturally interested, contributing as they do to the bulk of absenteeism, tardiness, and general inefficiency. It is at this point that the liaison between psychiatrists and personnel departments should be closest, so that the costly trial and error process of hiring and firing can be materially reduced.

Consider a hypothetical case:

M. B., an excellent file clerk for six years, a quiet little person, going efficiently about her work, suddenly develops fainting spells, becomes irritable and is hard to get along with. Her work suffers, she makes inexplicable errors. She becomes slightly hysterical at the slightest reproof. Her direct superior, knowing her previous good record is reluctant to do anything about it. Finally, in the interests of efficiency he must send her to the personnel division.

Now here is a crucial point, both for the personnel man and Miss B. No matter how kindly and understanding he may be, he still, in her eyes, is the symbol of Employer with a capital "E." Undoubtedly she is frightened. She feels she is being called "on the carpet." Her liveliness is in jeopardy. She is under a definite handicap. So is the personnel man. He knows her record is good, he wants to give her a chance to explain and "snap out of it." But all the tact in the world in Mary's case is unavailing. She is trying instinctively to hang on to her job, and therefore attempts to conceal the real reasons, no matter what the underlying causes of her deficiency may be.

PERSONNEL ALTERNATIVES

It is something of an impasse for the personnel man. He has three obvious alternatives. Let her go or send her back to her job with a warning about her irritability and inability to do good "teamwork" or place her in a new job. If the first

course is adopted, it comes immediately under the costly trial and error plan, a new girl to break in, shifts to be made, etc. If the second, Mary goes back to her job harassed and her confidence in herself shaken and the situation gets no better. If Mary goes to a new job, she is emotionally unfit to face the new problems and master the new work at that time.

Mary's case with variations is typical of thousands. She need not be lost to the organization which trained her. And, barring the slight lapse, may become as good an employee as ever. The personnel man confronted with a dilemma of this kind, has only to lift his phone and call the company psychiatrist and say: "Doctor, I wonder whether you would talk to Miss B."

HOW PSYCHIATRIST WORKS

Mary, in due course, arrives at the psychiatrist's office. Here is maintained an atmosphere of informality. She feels that her confidences will go no further and will in no way react upon her company record. Nine out of ten times she proceeds to unburden herself, often in tears, an obvious relief from tension. Any number of factors may be the underlying cause of Mary's upset,—an alcoholic mother who keeps the home in an uproar day and night—a mentally sick brother to be kept in the back-ground as a family skeleton,—a father whose shady business practices have caused him to clash with the law,—a sister who has become involved with a married man—excess

of sexual frustration—getting under the influence of a strange religious cult with quasi-sexual rites sworn to secrecy—parental domination.

One could list a great many outside emotional factors which cause pre-occupation at work, and which often manifest themselves in physical symptoms. Yet, these are factors which the employee naturally tries to keep from the employer. There may be personality clashes with her immediate superior, with one of her associates, etc., causing Mary to be very unhappy, but she feels it is unfair to tell the personnel division about her personal likes and dislikes. On the other hand, the psychiatrist is in a position of inestimable advantage due to his or her peculiar relation to the company.

In the employee's mind, although the psychiatrist is *with* the company he is not *of* it, a fact which removes a large mental hazard from the employee's mind. She can approach him without hesitancy and speak freely. Secondly, there is the medical aspect. Tradition has made the doctor a combination of friend and counsellor. The long founded belief that he is there to help, plays an important rôle. The psychiatrist listens sympathetically, and is able by his medical training to sift out the symptoms, and classify them as having a true physical basis or an emotional one. If the symptoms are emotional the task of getting at the deep seated causative factors may be long and tedious. It is a painstaking job, necessitating sometimes hours of

patient questioning and close observation, hours that a personnel worker does not usually devote to the task.

MISFITS CREEP IN

Generally speaking, it is hardly reasonable to expect personnel men, whose duties must necessarily lie along the lines of business and production efficiency, to contend with the myriad disturbances arising from personality clashes or nervous disorders. If this were so, they could do little else. The psychiatrist can be, properly used, their buffer and sieve to separate the malingerer from the truly sick, who is deserving of organization help.

It is obviously true that in employee selection, personnel workers must be guided by certain well laid down factors of qualification, adduced by the application formulae and personal interview. It is equally true, however, that despite vigilance and close scrutiny, the "misfits" do creep in. On the surface, their qualifications seem to fit them perfectly for the work offered. Outwardly they appear tractable and personable. But of course under the circumstances, they are all putting their best foot foremost. Back of an ingratiating exterior may lurk a personality which will be distinctly undesirable to the company or to fellow workers.

The psychiatrist may also be of service to industry by early detection of those people who have a faulty way of meeting life. Early detection

means early treatment, thus avoiding much absenteeism. It is interesting to note that the severe cases seen in State Hospitals and private mental sanatoria have all had a gradual onset—mental breakdowns do not come as "a bolt from the blue" as often described. The emotional change is a gradual process of development which tends to go unrecognized until finally it reaches a stage of activity where it can no longer be ignored. If these cases of maladjustment to life are picked up early much may be done to prevent a progressive decline. This is important from the angles of production and efficiency.

Dr. Frederick Robbins of the United States Veteran Hospital at Perry Point, Maryland, has summed up the relationship of mental health to industry in the following paragraph:

"The time has arrived in our development of industry when it is well to stop and consider the human material in relation to mental hygiene. Without industry we would have no civilization in its highest development, and without the human element we would have no industry even in its simplest forms; it therefore behooves us to care for our human material, safeguard it well, protect and care for it, for in so doing we have preventive medicine functioning at its best."

In the final analysis, no matter how big an organization becomes in the aggregate, the individual workers cannot be dehumanized. They will always be there with their human frailties, foibles, and vicissitudes. These cannot be ignored if efficiency is to be maintained and frictions avoided.

There has been a Scarcity of Information
on Apprentice Training. This Bulletin
gives Much Practical Information.

Indentured Apprenticeship

Selected parts of Bulletin III
which was prepared under the direction of
WM. F. PATTERSON
Federal Committee on Apprentice Training

THERE are several separate and distinct groups interested and vitally concerned with an apprentice training program. Among these groups that should be satisfied are the employer, the employee, the apprentice, the consumer and the State.

To offer some means whereby necessary coöperation and coördination may be achieved to the best advantage of all the groups concerned, apprenticeship under the national apprentice training plan entails fundamentally adherence to four standards: a definition of the term "apprentice;" provision for an administrative committee in each State and for advisory committees; an agreement between the employer and the apprentice, and provision for

issuing a certificate upon the completion of the apprenticeship.

APPRENTICESHIP DEFINED

The term "Apprentice" as used herein, shall mean a person at least 16 years of age who has entered into a written agreement (indenture) with an employer, an association of employers, an organization of employees, or other responsible agency, which agreement provides for more than 2,000 hours of reasonably continuous employment for such person and for his participation in an approved program of training through employment and through related technical and general subjects. Nothing in this definition is intended to apply to those apprentices provided for by the civil service laws.

APPRENTICE AGREEMENT

Experience indicates that bona-fide apprenticeship seldom exists where there is not an agreement between the employer and the apprentice which includes in writing, stipulations on the following:

A. The extent of the period of apprenticeship and of the probationary period.

B. Schedule of processes to be learned.

C. Approved program of related technical training under the direction of the proper school authorities.

D. A progressive wage scale.

E. The hours an apprentice works.

APPRENTICE CERTIFICATE

A certificate upon completion of apprenticeship will show that the apprentice has satisfactorily completed the prescribed apprentice course and has received the requisite of practical training to fit him as a journeyman.

TRADE ADVISORY COMMITTEES

One of the first steps in developing a procedure for indenturing apprentices is that wherein members of the trade or industry organize a committee for the purpose of recommending standards, regulations, and policies for the organization and development of indentured apprenticeship in the trade or industry.

If modern apprenticeship were just employment there would be no need for advisory committees. However, it should be kept clearly in mind

that apprenticeship means training persons under a contractual relationship in which several groups have an interest. The contractual relationship assures the person of a reasonable opportunity to complete in an orderly, systematic manner every step in the occupation to be learned.

The advisory committees set the machinery in motion for possible placement in a trade or industry under conditions favorable for training, and have the responsibility of assisting in making adjustments of problems that arise during the period of the apprenticeship.

APPRENTICE COÖRDINATORS

Good results can be achieved if certain key men are delegated by a State or local Committee to be responsible for initiating the organization of trade advisory committees in sections where they are needed, and for supervising the preparation of the apprentice agreements, which are in turn approved by the State Committee or by persons or agencies delegated by the Committee to do so.

In the majority of cases a key man takes the lead in the developmental and promotional work in a certain section, is the local Vocational Education Director or one of his coördinators, the branch manager of the Employment offices, field deputies of the State Labor Department, or the Vocational counselors or local administrators of the National Youth Administration.

If these individuals (apprentice coördinators) can persuade employ-

ers, through their trade associations, to hold State-wide conferences for the purpose of determining policies in regard to apprentice training and, if as a result of these conferences, provision is made for the appointment of trade advisory committees, State or local, the problems concerning apprenticeship are well on the way towards solution.

Dr. Stewart Scrimshaw in his book "Apprenticeship" (McGraw-Hill) points out that, "The success of apprenticeship training depends more and more, upon groups of employers, group attitudes and group action, rather than upon the individual employer. The future of apprenticeship depends preëminently upon the coöperative effort which can come from organized groups."

EMPLOYERS AND APPRENTICE TRAINING

After standards have been established, advisory committees organized, and well laid plans made, it must be remembered that the biggest job is to put the plan into operation. Results cannot be accomplished without the undivided support of all who are concerned and they will come only after all are thoroughly acquainted with the benefits and values accruing to them in training apprentices. This must be done locally, as well as on a State and national basis. All should be thoroughly acquainted with sound practices of apprentice training and this is why educational methods must be employed in this respect.

Every man who served an appren-

ticeship and every one who has trained apprentices realizes the importance of a well organized, well regulated training program, that will govern entrance into the occupation, set up minimum standards, and offer a thorough training.

The employer, however, expects certain things of apprenticeship if he is to be included among those who are training apprentices. He wants some assurance that the apprentice he hires will remain in his employ for the entire period of the apprenticeship. He expects to employ the apprentice at a reduced wage in return for the value of the training given. He must be assured that other employers within his industry will do their share in training the proper ratio of apprentices. If he suspects that his competitor is going to hire his graduated apprentices as fast as they complete their terms of apprenticeship, he is not interested in an apprentice training program.

TRADE UNION ATTITUDE

The record of trade unions show that they are definitely in favor of an apprentice training program which encompasses the following features:

1. Use of the apprentice agreement which is subject to approval by an impartial third party, usually representing public authority.
2. That the training of the apprentice both on the job and in school be broad enough to insure both versatility and adaptability.
3. That attention be given to a plan for better distribution of skilled

workers so that particular crafts will not be overcrowded and so that every graduate of an apprenticeship will have assurance that he can be absorbed in the trade.

4. That the interest of the apprentice and the public will always be the predominant consideration.

5. That the apprentice is paid that ratio of the journeyman's wage in proportion to his worth. It is not of permanent benefit to the apprentice to set the progressive wage rate too high to begin with, since this may have a tendency to minimize the broad training the apprentice should receive on the job, and also cause him to take the attitude that he is working for wages rather than for a permanent training.

APPRENTICE AGREEMENTS

The standard of skill in the trade runs closely parallel to the number of indentured apprentices engaged in that trade and not to the number of learners. There are plenty of learners in the trade, altogether too many in some of them, but since they are not indentured they seldom complete a full term of training and consequently they are not developing into competent mechanics.

It is easier for an apprentice not to attend school and not to stay on the job for the duration of the term of training, than it is to subject himself to the restrictions that are necessarily imposed upon an apprentice in order that he may get the broad training

and experiences which are necessary to qualify as a skilled craftsman. It is easier for the employer not to send the boy to school and not to provide work of an educational value, than it is to fulfill the duties a master owes to his apprentices. In the absence of an agreement that is exactly what happens. An agreement, however, definitely places on the parties to it certain obligations which cannot be avoided if we want to produce skilled men.

The difference in labor turnover between indentured apprentices and other employees is very great. An apprentice under an agreement is reasonably certain to remain with his employer for the full term of training. The agreement is a powerful influence in keeping the apprentice on the job, because he knows, his parents know, and the employer knows that he is expected to work a certain period of time to complete his term of training.

A boy will usually not hesitate to enter a trade or industry as an apprentice if the employer is willing to put his promises in writing in the form of an agreement. Most modern youths cannot be fooled into thinking that they are learning a trade when they are not. They cannot be blamed for demanding the highest wages when their employers refuse to enter into a definite agreement with them. The matter of wages becomes of little consequence when agreement and genuine training are offered.

To Develop Employee Confidence in the Fair and Impartial Estimation of His Efforts.

Rating Employees

By WALTER V. CLARKE

R. H. Macy & Company
New York, N. Y.

HAVING employed an individual for a given job, the problem of evaluating this person's worth to the organization soon arises. Is his production satisfactory? Is he promotional material? How does he get along with his fellow employees? These questions, and others similar in nature, must be answered by those responsible for the supervision of personnel activities in the organization. This may be accomplished by the use of the various instruments now available for evaluating employees. The methods here described have been devised by a large department store to meet the particular needs of such an institution. The general theoretical basis, however, is probably applicable to any similar organization.

PRODUCTION IS MEASURED

In any judgment of the worth of an individual the first consideration is

productivity. If the production factor involves the repetitive handling of a material unit, it is possible to devise a simple mechanical leverage system connected directly with Vee-der counters so that the completion of each task is automatically recorded. The actual mechanical recording of the number of transactions handled in a day by a tube-room cashier, for example, is made by measuring the number of carriers passing through the output pneumatic tube of her desk. The passage of the carrier depresses a lever in the tube as it passes, activating the recording mechanism. Each carrier thus represents one completed transaction. The total can be verified by the number of duplicate saleschecks collected during the day.

In other departments where direct, mechanical recording is not possible the number of saleschecks handled or the number of packages wrapped

may serve as a basis for record. In every case, however, where the supply of work is continuous, this type of record is used. The objection may be made that in different divisions of the same job the type of work is not comparable, since a packer who handles small packages can wrap many more than one who handles large or fragile packages. These dif-

In the case of the selling personnel, production is measured in terms of the total number of transactions and the amount of these transactions. A percentage figure is again available, known as the selling cost. This is the weekly net earnings divided by the weekly net sales. These figures are comparable to others within the department and also to the depart-

FIGURE I. TYPICAL WEEKLY REPORT OF PRODUCTION

RECORD OF PRODUCTION AND BONUS EARNED							DEPT. Cashier		WEEK ENDING, 6-1-36		
AUTHORIZED BY							DIVISION 3				
BONUS EARNED	NAME	STAFF NO.	JOB	EFFICIENCY	PRODUCTION		TOTAL TIME IN			NON-STANDARD WORK	ERRORS
					ACTUAL	REQ. PROD. AT 53.5 %	STANDARD	NON-STANDARD IN DIV.	OUT OF DIVISION		
	Brown	4	Cashier	76	4590	3225	43	2			2
	Jones	5	"	101	6385	3375	45				5
	Smith	17	"	47	2858	3263	43½	1½			2
	White	22	"	128	5396	2250	30				2
	TOTAL		NO. OF PEOPLE				% TO TOTAL TIME				
			SUPERVISOR'S PRODUCTION								

ferences in type of work are considered in the establishment of the normal job efficiency. Standards are always dependent upon the group involved and are derived from past production records. When these standards are expressed in terms of percentages of the maximums of the group, any two groups may be compared and equated.

ment average. Weekly report sheets similar to that shown in Figure I are usually compiled. From these sheets it is possible to picture the trend of an individual's progress and to detect any abnormal deviations in rate. Actual production is recorded and the time spent in standard or non-standard work. The required production for the time spent

at the efficiency level of the group is inserted and the percent efficiency of the individual derived from these figures. Errors are also recorded as a measure of quality. If desired, the percent efficiency may be graphically recorded for study of individual or group variability. An example of such a chart, covering a period of one year, is shown in Figure II. From

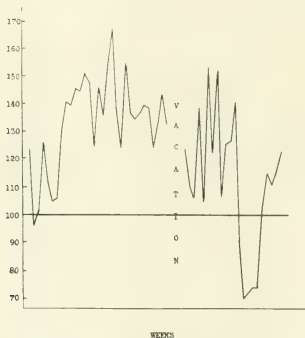


FIGURE II. TYPICAL CHART OF PRODUCTION EFFICIENCY OVER A PERIOD OF FIFTY-TWO WEEKS

such a chart, the trend of efficiency as well as any large unexpected deviations which may require investigation, are immediately perceived. Corrective steps may be taken to counteract a sudden decrease in efficiency.

RATING BY THREE SUPERVISORS

Obviously the effectiveness of an individual in any position is dependent on other factors in addition to

production and these must also be studied. Along with the records of production are considered the ratings made by immediate supervisors who come in constant, intimate contact with the individual clerk. A form is provided for rating on a three point scale such qualities as job knowledge, judgment, quality, contacts, coöperation, and appearance. To increase the value of such ratings each supervisor is warned against the pitfalls common to a subjective attitude. An approximation to objectivity is obtained by the technique of averaging several ratings on a definite scale. Relative position on such a scale may be found and objectivity is accomplished in terms of such position.

Since our measurement of these factors must be in gross terms, such as presence or absence of a trait rather than the exact degree or amount of its presence, the rating scale used is simple in form, and with well-defined extremes. It has been found, in actual practice, that the three point scale of positive tendency, average, and negative tendency is most practical. At least three judgments by different individuals who have personal contact with the person rated are necessary to counteract individual bias in rating. A portion of such a rating scale is illustrated in Figure III.

It is often necessary to consider other factors than those covered by these records. This is advisable when the general level of efficiency shows a decided or continuous drop.

Health problems may need to be taken up with the Medical Department. The help of the Social Service Department may also be needed to take care of certain cases when home problems affect the effectiveness of work. It is sometimes necessary to conduct case studies in which trained interviewers, aided by psychological tests, medical and social records, seek the cause of difficulty. Such detailed studies, however, are con-

ager, Floor Superintendent, Training Supervisor, Employment Interviewer, and a chairman assigned to conduct all such meetings, acting in the capacity of an arbiter. Each individual is considered in the light of the various reports received since the previous review. At this meeting all the data and ratings are coordinated and evaluated and a decision made on the disposition of each case.

FIGURE III. TYPICAL RATING SCALE

Kindly rate.....Staff No..... on the following traits.
Please do not confer with anyone else. Your own reaction is desired.

WORK OUTPUT

Tends to high efficiency Aver..... Tends to low efficiency.

WORK QUALITY

Tendency to frequent error... Aver..... Usually free from error...

LEARNING ABILITY

Tends to learn easily... Aver..... Learns slowly.....

INTEREST

Tendency to show little interest..... Aver... . . Shows great interest

ducted only if the individual involved has been employed for several years.

PERSONNEL REVIEWS BY COMMITTEE

Increase or decrease in salary, transferral, promotion, or discontinuance of service for each individual in the organization is considered every six months in a Personnel Review, conducted by a committee consisting of the Department Man-

When an individual has been considered by the Personnel Review and the final decision indicates the necessity, the training supervisor will explain the results of the committee's decision to him. This aids the individual to obtain insight into his problem and make an effort to correct his faults. If the results indicate the need for a transfer or the possibility of promotion, the individual's name may be placed in a special file

and considered when any requisition for new employees comes through, or an opening of higher rank occurs.

It is not always necessary to wait for the regular review period for consideration, for employees are always at liberty and feel entirely free to bring any of their problems to the Personnel Department for solution. If they feel that they should receive more money or would be more satisfied in another department, they can safely express their feeling, secure in the knowledge that it will receive careful attention, and will not react against their present position.

EMPLOYEES CONFIDENT OF FAIRNESS

As industry becomes increasingly aware of the problems of the individuals who make up the total organization, the need for a fair, unbiased, relatively accurate method of evaluation of each of these individuals has become increasingly apparent. Although employee unions have attempted to right past wrongs by pitting organization against organization and have succeeded to some extent in eliminating some of the grosser inequalities, it is only by equitable, human treatment of the individual that unrest, overt or implicit, may be set at ease.

It is not the general social problem of the group that is of major importance to the individual, but rather those inequalities or unfairnesses that

pertain to himself in particular. In spite of social consciousness, the basic law of "every man for himself" remains fundamental. Of utmost importance to any man is the particular prestige evidenced by his position, his salary, and the way he is treated.

If promotion and salary increases are the prerogatives of, or controlled to a large extent by, a single supervisor, personal feelings are apt to be involved and attitudes developed which in time militate against not only the immediate superior, but the organization as a whole. If, however, the promotions and salary increases are controlled by a general non-personalized committee and based upon tangible factors, such as production, absence, quality of work, and general ability, the probability of arousing harmful attitudes is greatly reduced.

These methods provide the employer with a means for equably locating the employee on his proper job and salary level. They permit the observance of any variation from the normal level of efficient operation, and suggest the action to be taken to readjust to this level.

The main objective sought by this system of employee evaluation is to develop a feeling of confidence on the part of the employee in the impartial estimation of his efforts. This eventuates in greater efficiency, and better understanding between the employee and management.

The Establishment of an Orderly and Equitable Procedure for the Payment of Workers.

Salary *and* Wage Administration

By SAMUEL L. H. BURK

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Philadelphia, Pa.

Editor's Note. A series of discussion group meetings sponsored by the Philadelphia Personnel Association and arranged by a sub-committee organized for the purpose, was held in the early months of 1936 to discuss salary and wage administration. Following is a brief resume of these discussions:

A COMPLETE program of salary and wage administration is comprised of three chief steps: Job Analysis, Job Classification, and Salary Administration.

Job analysis is defined as "the definition of the duties and responsibilities involved in jobs, and the qualifications necessary to their successful fulfillment." As possible by-products or co-products of job analysis are bases for methods improvement, organization studies, more thorough selection practices, better knowledge of promotional lines and requirements and a better method of dealing with employees on matters of wage scales.

Job classification involves the grouping into grades or classes of most jobs in an enterprise according to their relative difficulties and importance. This grouping or classification is usually made in such a manner as to permit an orderly application of rates of pay to the resulting classification scale.

Salary and wage administration includes the establishment of an orderly and equitable procedure for the payment of workers in classified jobs, for discussion of rates between men and management, for provision for recognition of individual merit within classifications and for co-operation with other phases of man-

agement in providing adequate selection of new employees and promotion of employees within the organization.

The success of a job analysis plan hinges upon full, detailed job descriptions. In order to secure such descriptions the information must be gathered from as close to the source as possible. Job analyses have been made by discussing job content only with supervisors, but this has usually been done because some other factors made it appear inadvisable to go directly to the workers. Supervisors, unfortunately, are not always familiar with all of the duties of their subordinates, whereas the workers are too prone to over-sell their work and to describe duties not fully assigned to them. The best practical plan is to secure data from both employees and supervisors, using one group as a check against the other.

STUDY EACH JOB

The method used in securing preliminary information depends largely upon the types of employees being studied. Two sets of questionnaires, one to be filled out by each supervisor for every typical job under his jurisdiction, and the other by every employee on each job, facilitate interviews by the job analyst. In studying the lower grade, unskilled and semi-skilled labor classifications, the use of questionnaires is impossible. With all classes of employees it is highly desirable to interview a reasonable sampling of employees *at*

their work places. This method gives the employee a sense of coöperating in the analysis and some idea of the factors which will enter into the evaluations of his job; the job analyst is enabled to vary his questions to meet the demands of the peculiarities of the work and the characteristics of the worker. Moreover, the analyst can not hope to secure the full feeling of the various kinds of work unless he is exposed to close contact with the workers at their usual locations.

Statements concerning duties and qualifications made by supervisors or employees should be made the subject of close scrutiny by the analyst. The employees' statements of duties are usually complete but require additional analysis in order to coördinate the elements and to get the complete picture of the job. The analyst should try to see each assignment worked upon and, in the case of clerical operations, secure sample copies of forms with notations of the work done by each individual, for future reference.

Considerable study and analysis should be devoted to the design and content of the forms used to record the results of fact finding. Some printed form should be used for recording answers to questions used in the interviews with employees. If questionnaires have been employed it is frequently possible to make notes as needed in the margins, otherwise, however, a printed interview form should be designed to serve as a guide and check sheet in asking questions

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INTERVIEWERS' ROUGH NOTE SHEET

Job Title	Other Titles	Dept. & Location	Normal Force
Empl Name	Immed Supervisor	Time on This Job; Company	Elsewhere
Equip. Used	Tools Used	Materials Used	

Work Rec'd From	With What Instructions
-----------------	------------------------

Duties

(Use Other Side If Necessary)

Work Goes To	Describe Checks, Inspections, Etc.
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Contacts With Others

Hours: Regular, From	To	Sunday, From	To	Shift	Hours Over-time Per Mo.
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Comments on Work. Cond.: Atmos.

Surroundings

Activity

Hazards

Illumination

Other

Exercises Supervision: Normal Force

Type(s) of Work

Equipment Respons.

Material Respons.

Opinions on Starting Requirements: Age—Min. Male Married Height—Min. Wt.—Min.

MISC. REMARKS: Max. Female Single Max. Max.

Special Physical

Education: Gr. 0 1 2 3 4 5 6 7 8 High 1 2 3 4 College 1 2 3 4

Other Educ.

Experience: Necessary Years of

Desirable Years of

Special Knowledge or Ability

Time for New Emp. to Become Proficient

Promote From Promote To

Worker: Fluent	Average	Could Not Express Thoughts	Interviewer
Bright	Intelligent	Aver. Dull	Date

Satisfactory Interview?

and recording answers, in order that as many of the possible questions may be answered in the initial interview, thus reducing the necessity for returns to the worker for further information. The interview form should list the information to be secured in logical sequence, using the "check list" principle wherever possible to eliminate unnecessary writing.

ROUGH NOTE SHEET

It is advisable, to use a preliminary job description form in all cases in which the job analysis survey is starting with no previous background. It is well nigh impossible for a job analyst new to an individual company, or for an old company employee new to job analysis to foresee and provide for all of the requirements of a job specification form before any analysis work has been done in that company. The preliminary form provides space for notations concerning all of the possibilities which may be foreseen and more space for those conditions and requirements which will come to light early in the study. One of these forms should be filled out for each typical job, following a sufficient number of individual interviews of workers on that job. By "typical" job is meant one in which the duties, requirements, responsibilities and conditions are the same for a number of employees. In writing these preliminary sheets, care should be exercised in combining individual jobs into typical jobs; it is better to

err on the side of too many descriptions at this stage than too few, as it is easier to combine later on than to separate that which has been inadvisably combined.

The designing of the job specification form should follow the completion of the preliminary sheets for a fair sampling (at least 20%) of the total number of jobs to be studied. Specification forms used in successful analyses in other companies are helpful in determining the general outlines but the final determination of the form to be used should depend upon the findings resulting from an analysis of the preliminary descriptions.

The specification form should consist of three main divisions:

1. Provision for entry of the necessary identification information.
2. Space for a full and rather detailed description of duties which should indicate the "how," "when," "where," "what" and "why" of each duty presented in logical order or sequence of operations, plus provision for indicating the chief *differentiating* factors between the job being described and similar jobs.
3. Space for entry of standardized and well defined terms summarizing briefly but concisely the qualifications, responsibilities, surroundings, hazards, etc., of the work, all grouped in such a manner as to facilitate classification by whatever method has been selected, at the same time affording a record which can be understood by those who will later use the form.

FD-302 (Rev. 5-22-64)

INTERVIEWERS' DATA SHEET

Title _____ Alternate _____ Normal _____ No. Inter-
Titles _____ Force _____ views _____

Dep't/s _____ Location(s) _____

NATURE AND CONDITIONS OF WORK: (Use X to Indicate; XX to Stress, or "75" for Percentage).

PLACE:	ACTIVITY:	SURROUNDINGS:	TEMPERATURE:	HAZARDS:	DUTIES:
<input type="checkbox"/> Outdoor	<input type="checkbox"/> Standing	<input type="checkbox"/> Clean	<input type="checkbox"/> Extreme Heat	<input type="checkbox"/> Fire	
<input type="checkbox"/> Indoor	<input type="checkbox"/> Sitting	<input type="checkbox"/> Dirty	<input type="checkbox"/> " Cold	<input type="checkbox"/> Explosion	
<input type="checkbox"/> Platform	<input type="checkbox"/> Hauling	<input type="checkbox"/> Greasy	<input type="checkbox"/> Natural	<input type="checkbox"/> Electricity	
<input type="checkbox"/> Overhead	<input type="checkbox"/> Climbing	<input type="checkbox"/> Gangwork	<input type="checkbox"/> Sudden Changes	<input type="checkbox"/> Strain	
<input type="checkbox"/> Underground	<input type="checkbox"/> Lifting	<input type="checkbox"/> Crowded		<input type="checkbox"/> To Eyes	
<input type="checkbox"/> Scaffold	<input type="checkbox"/> Walking	<input type="checkbox"/> Orderly	INSTRUCTION:	<input type="checkbox"/> " Ears	
<input type="checkbox"/> Pit	<input type="checkbox"/> Holding	<input type="checkbox"/> Distractions	<input type="checkbox"/> Written	<input type="checkbox"/> " Lungs	
<input type="checkbox"/> Water	<input type="checkbox"/> Driving	<input type="checkbox"/> Lonely	<input type="checkbox"/> Oral	<input type="checkbox"/> " Nerves	
<input type="checkbox"/> Not Localized			<input type="checkbox"/> " Phone	<input type="checkbox"/> " Skin	
			<input type="checkbox"/> Standard	<input type="checkbox"/> " Limbs	
			<input type="checkbox"/> Self	<input type="checkbox"/> " "	
TYPE:	OPERATION:	ATMOSPHERE:	ILLUMINATION:		
<input type="checkbox"/> Desk	<input type="checkbox"/> Repetitive	<input type="checkbox"/> Natural	<input type="checkbox"/> Natural	<input type="checkbox"/> Violence	
<input type="checkbox"/> Bench	<input type="checkbox"/> Varied	<input type="checkbox"/> Ventilated	<input type="checkbox"/> Glare	<input type="checkbox"/> Falls	
<input type="checkbox"/> Machine	<input type="checkbox"/> Automatic	<input type="checkbox"/> Excel.	<input type="checkbox"/> Artificial	<input type="checkbox"/> Machinery	
<input type="checkbox"/> Hand Tools	<input type="checkbox"/> Semi-Automatic	<input type="checkbox"/> Good	<input type="checkbox"/> Good	<input type="checkbox"/> Chemicals	
<input type="checkbox"/> Counter	<input type="checkbox"/> Much Activity	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair	<input type="checkbox"/> Vehicles	
<input type="checkbox"/> Pumps	<input type="checkbox"/> Heavy	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor	<input type="checkbox"/> Other Workers	
<input type="checkbox"/> Power	<input type="checkbox"/> Emergency	<input type="checkbox"/> Draughty			
<input type="checkbox"/> High Pressure	<input type="checkbox"/> Set-Ups	<input type="checkbox"/> Gas			
<input type="checkbox"/> " Voltage	<input type="checkbox"/> Layouts	<input type="checkbox"/> Fumes, Odors			
	<input type="checkbox"/> Templates	<input type="checkbox"/> Dust			
		<input type="checkbox"/> Dry			
		<input type="checkbox"/> Humid			
			Responsibility and/or Supervision: _____		

OPPORTUNITIES:

Starting Rate _____ Per _____ Scheduled Increases _____ Piece Work _____
Bonus _____ Aver. Earnings/ _____ \$ _____

Inexper. Time to Learn _____ To Become Proficient _____ Promote From _____ To _____

Apprenticeship _____ Yrs. Journeyman _____ Yrs. _____

REQUIREMENTS. (Use X, XX, % or "R"—Required, "P"—Preferred).

AGE:	HEIGHT:	INTELLIGENCE:	ELEM. KNOWL.	Personal Qualities:
<input type="checkbox"/> Min.	<input type="checkbox"/> Min.	<input type="checkbox"/> Highest	<input type="checkbox"/> Add., Subt.	
<input type="checkbox"/> Max.	<input type="checkbox"/> Max.	<input type="checkbox"/> Second	<input type="checkbox"/> Mult., Div.	
SEX:	WEIGHT:	<input type="checkbox"/> Average	<input type="checkbox"/> Frac. & Dec.	
<input type="checkbox"/> Male	<input type="checkbox"/> Min.	<input type="checkbox"/> Low	<input type="checkbox"/> Percentage	Experience:
<input type="checkbox"/> Female	<input type="checkbox"/> Max.	<input type="checkbox"/> Lowest	<input type="checkbox"/> Shop Arith.	
<input type="checkbox"/> Either	STRENGTH:	EDUC. LIMITS:	<input type="checkbox"/> Blue Prints	
MARITAL STATE:	<input type="checkbox"/> Necessary	<input type="checkbox"/> Grade	<input type="checkbox"/> Good Hand	
<input type="checkbox"/> Single	<input type="checkbox"/> Not Essential	<input type="checkbox"/> High	<input type="checkbox"/> English	
<input type="checkbox"/> Married	SIGHT:	<input type="checkbox"/> Coll.	<input type="checkbox"/> Understand	
COLOR:	<input type="checkbox"/> Keen	<input type="checkbox"/> Kind	<input type="checkbox"/> Speak	<input type="checkbox"/> Journeyman ..
<input type="checkbox"/> White	<input type="checkbox"/> Normal		<input type="checkbox"/> Read	<input type="checkbox"/> Apprentice ..
<input type="checkbox"/> Black	<input type="checkbox"/> Color	<input type="checkbox"/> Special	<input type="checkbox"/> Write	<input type="checkbox"/> Inexperienced ..

Special Knowledge, Etc.:

Interviewer

When the filled-in forms have been checked for accuracy, completeness, distinguishing features of each job, etc., by someone who has not written the specifications, they should be referred to the appropriate line executives for criticism, discussion and approval. The need for securing detailed and not cursory approval can not be over-emphasized; the approving executive must be made to realize that the jobs under him will be rated on the basis of these descriptions; complete and thorough understanding and agreement will eliminate the greater part of later disagreement with ratings and result in fewer, shorter conferences on classification.

With the job analysis completed to this stage, there will be available a description of each job. The next step is to grade, evaluate and classify the jobs according to their difficulty, skill required, etc.

CLASSIFYING JOBS

There are two definite schools of thought in connection with methods of evaluation. They might well be characterized as the "overall" comparison and the "point system" schools. Each side claims advantages and disadvantages.

There appear to be two general types of "overall" comparison methods in use which vary slightly in detailed application:

1. The "job ranking" method—This method involves ranking each job in each small unit of the company. Each of these rankings is then agreed upon with the supervising

head of that unit. All jobs in units in that division are then "inter-ranked", and the results of this step approved by the executive at the head of that division. This process is continued up the organization scale until intra-departmental rankings are completed and agreed upon. Arbitrary grade lines are then drawn across all jobs in all departments, special attention being given to "borderline" cases. The grading and inter-departmental classifications are then submitted to department heads for criticism or approval, and final decisions made by some impartial group or individual, before rates of pay are applied to the grades.

2. The "pre-determined grade" method—Classification under this method is accomplished by setting up grades of work and definitions of these grades prior to any ranking (sometimes prior to job analyses, and frequently after). As job descriptions are completed, each job is classified into one of the pre-determined grades. The results are then approved by department heads and other executives before rates of pay are applied to the grades.

There are three "point" systems.

1. The "pre-determined weight" class—In such systems, the authors have set pre-determined values on each of the factors entering into jobs, such as age, education, years of experience, etc., in such a manner that, for example, less than six years' education would receive 0 points; six to seven years, 1 point; eight to nine years, 2 points, etc. The chief

limitation of this class of point system is that the correctness of the rating depends entirely on the arbitrary judgment of the person who originally set up the scale.

2. The "selected weight" class
After job analysis, the jobs are classified into occupational types of work such as, for example, machine tool operators, common labor, etc. A study is undertaken to determine the various factors influencing the values of jobs and, having determined these, to assign, using the pooled judgment of a competent group, maximum point weights to each factor for each type of work so that the total of the maxima equals some pre-determined total, such as 1,000. The "total points" is the same for each occupational type, although the maximum weights for each contributing factor differ among the several types. For example: machine tool operators may be assigned maxima of 250 points for experience, 100 points for educational requirements, 50 points for exposure to accident hazards, etc. to total 1000; on the other hand, common labor may be assigned maxima of 100 points for experience, 50 points for educational requirements, etc. When the maximum weights and their relationships have been determined, it is then necessary to assign weights for requirements less than the maximum, for example: machine tool operator's maximum skill, 10 yrs. or more, 250 points; 9 to 10 years, 220 points, 8 to 9 years, 210 points, etc. Having constructed similar scales for all factors in all occu-

pational types, the specifications are rated against such scales and "total points" for each job is determined. This class of system has been widely used and been successful in operation.

GOING RATES

3. The "going rate weight" systems—These systems build up their point values by using the pooled judgment of a group in order to determine factor weights based directly upon the present rate schedule of the company being studied. For example, assume that initial investigations had indicated that five main groupings of minor factors could be used, namely: skill, mental effort, physical effort, responsibility and working conditions. Fifteen or twenty jobs would be selected which ranged in present rate from nearly the lowest to nearly the highest. These jobs should be easily defined and well established, with no apparent disagreement as to the validity of their present rates. The rating group would then divide the present rate for each selected job into five parts, assigning a number of cents per hour to each of the five factors in accordance with the weight that they estimated each factor should bear to the total rate for each job. After thorough discussion of these relationships, the analyst is provided with a "measuring stick" for each factor against which all other jobs can be compared. By totaling the points assigned to the five factors, conversion to correct cents per hour becomes automatic. The use of this

PLANT JOB SPECIFICATION

764

1297

SERIAL
NUMBER

Pressman

Shift

Alternate

Adjuster

Pressroom

403

Derivis

Shipping

112

APPROVAL

LOCATIONS

DIVISIONS

DIVISION
OF DIVISION

Operates "Top Press" which embosses desired design, etc. and punches spout holes in can tops. Stands on

low platform in front of press; throws lever (shifter) which engages machine drive with overhead drive shaft

holds stock of top blanks on rack with left hand; allows one blank at a time to fall to right hand, with

which he feeds blanks to machine; simultaneously engages clutch by depressing foot pedal with right foot;

repeats approx. 60 times per minute. Frequently changes dies in press and, as necessary, makes minor

adjustments to other machines in press room. In frequently molds leaking cans by hand, using solder, iron

Dexterity 30 % Care 25 % Endurance 20 % Practicality 15 % Patience 10 %

WORKING CONDITIONS

100% indoors

Top press hand tools.

Semi-automatically noisy gang work.

well ventilated

normal

natural and artificial machinery and hand tool

Practical Paper machine

95% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

100% steady.

method eliminates the assignment of varying weights to equal grades of the same job factor and produces a measuring scale more in accordance with an analysis of the present, actual relationships among factor weights.

JOB FACTORS

If any point system is to be used, it is necessary to break the job down into the elements to which mathematical rating is to be applied. The specification form, then, should be so designed as to facilitate rating in this manner. The preliminary sheets will be found very helpful in the determination of what these factors are and how the elementary factors may be grouped in order to eliminate unnecessary detail ratings. The number of such factors used in successful installations has varied from three to fifteen; from four to seven appears to be all that are absolutely necessary. The basic three factors are:

1. The minimum abilities which the employee must bring to the job and the extent to which he is called upon to use them on the job.

2. The responsibilities which the employer places on the employee in the job.

3. The conditions under which the job must be performed.

Any or all of these three basic factor groups may be expanded into two or more according to the peculiar requirements of each industry or company.

It appears almost too obvious to state that the job content and requirement be rated and not the attributes of the men

in the job; however, all too frequently job surveys fail because the individual, not the job has been considered.

In relating the grades of difficulty and responsibility to rates of pay, a check should be made against going or market rates. Statistical analyses of present rates paid to jobs in each group or grade together with rates paid by other firms for similar jobs should be made. One of the more commonly used methods is to prepare a scatter diagram with points or grades and present cents per hour or dollars per week, etc., as the co-ordinates. (See Personnel Journal, April 1936, p. 353.) Entry of the proper data for each job in the appropriate squares of the chart will produce information from which the trend of the comparison can be determined. Whether or not the resulting average or trend line is a parabola or a straight line depends largely upon the point system used and the type of jobs being studied. The thing to be remembered, however, is that it is definitely a mistake to draw a straight line between the point set at the lowest point rating and lowest wage, and the point set at the highest point rating and the highest wage, assuming by doing so, that the points in between fall along a straight line or a curved line.

It is not always possible to secure good comparisons with outside rates. Jobs bearing the same title in two organizations may differ widely in content. The only approximately accurate method of making such comparisons is to take job descrip-

tions of a random sampling of all positions in the study and compare them to a large number of jobs of similar content in other companies. This will prove helpful in making rough comparisons.

Installation of any new rate schedule which alters previously existing relationships among jobs is bound to cause some friction. This friction can be minimized but not eliminated by effecting no reductions in pay as a result of job analysis. This is not an entirely illogical position to take; overpayment of some jobs is more the fault of management than of men, and management should be willing to take some penalty for these past errors. If, however, downward adjustment must be made, some period of notice, or gradual reduction in accordance with the amount involved should be allowed. If general changes in schedule are contemplated, such as a general 10% increase, it is best to make such change simultaneously with the installation of the job analysis schedule. A general increase thus installed will lessen the number of rates which otherwise might be lowered.

Details of administering the plan after installation will vary with the organization scheme of the individual company and the types of workers covered. In companies employing factory, office, technical and supervisory employees every effort should be made toward uniform and comparative handling of all classes without removal of immediate control from those most closely in touch

with the various types but centralizing ultimate control in some one person or group. The plan of administration should provide for:

1. A periodic review or check to keep job descriptions and ratings up to date;
2. Machinery for orderly and systematic handling of:
 - a. Occasional jobs not covered by the original study;
 - b. New jobs not previously existing;
 - c. Jobs changed in content and requirements;
 - d. Complaints from employees or executives in connection with rates set in the new schedule;
 - e. Variations from comparative values to meet temporary conditions in the labor market.

The degree to which employee representatives should enter into salary and wage administration must be solved by the individual employer. Theoretically such representation is essential to completing the triangle of satisfaction, that is, agreement among the job analyst, the management and the men. This agreement can be reached much more expeditiously if all of the parties share in the initial determination of rates. In some rate surveys only one of these three parties may have set the rates. The usual case, however, combines the job analyst's work with consideration by the management. Some organizations have included representatives of the employees. Employee coöperation can best be secured through a formal representation plan. If such a plan has passed the "growing pains" period, it may be advisable to ask workers to participate.

SALARY RANGES

The use of salary ranges, i.e., minimum and maximum rates for each grade of work, with "step-rates"

between, is the only means whereby differences in individual performance can be accounted for in the basic wage (incentives, of course, compensate for individual differences by adding to the base). Successful administration of ranges in clerical and supervisory positions is common; use of ranges for hourly rated factory employees is not so common for at least three reasons:

1. It represents a radical departure from past practices and is thus far more difficult to sell;

2. The type of supervisor required as the source of recommendations for promotions within ranges, is frequently not of the type to be depended upon as the medium through which adequate control can be exercised;

3. Union demands for equal pay of all employees on the same job frequently eliminates the possibility of employing this useful tool.

If ranges are used some impartial group should have the power of accepting or rejecting recommendations of department heads for their employees. The personnel department should see to it that every employee is considered by his superior at least once a year; the superior should state reasons for not requesting an increase as well as those for requesting one. The reasons for increases should be indicative of an actual improvement in the employee's work in quantity, quality, etc. Additional length of service alone should not be considered a sufficient reason.

Book Reviews

LAW AND LABOR RELATIONS. By B. M. Selekmán. Harvard Graduate School of Business Administration, Boston, 1936, pp. 65, \$1.00.

Considerable light is thrown on such legislation as the Wagner Act by a study released recently by the Bureau of Business Research of the Harvard Business School under the title, "Law and Labor Relations," by Dr. B. M. Selekmán, lecturer at that institution. It is based upon twenty-seven years' operation of the Canadian Industrial Disputes Investigation Act, which introduced one of the oldest experiments in government intervention in industrial disputes.

This law, originally passed in 1907, prohibits under penalty any strike or lockout in mining and in public utility industries until a board of conciliation and investigation, appointed by the Minister of Labour, has submitted a report upon the dispute.

Significant among the findings reported by Dr. Selekmán is the change in attitude of organized labor. "Before 1918," he states, "the trade union movement was generally hostile and asked repeatedly for the repeal of the Act; but since 1918, labor has been consistently favorable and, in fact, has urged the extension of the law to any industry in which either side applies for a board. Em-

ployers, on their part, feel that the Act serves a useful purpose in reducing the possibility of stoppages in vital industries, but they are opposed to the extension of the Act."

In summing up the study, Dr. Selekmán said, "Perhaps most significant among the findings of the study is its demonstration of how the administration of a law like the Disputes Act can be utilized to embody into practice developing customs which are gradually rooting themselves in industry. A study of the Board's reports reveals clearly that, in spite of the absence of any industrial code, definite trends do emerge from the reports with the passing years—trends towards increasing wages, reducing hours of work, introducing improvements in conditions, and, finally, strengthening labor's status in industry by helping it attain a voice in determining conditions of work. In the early years the administrators of the law dealt rather reluctantly with issues involving employees' representation and collective bargaining. They now deal with them in all aspects, trying to carry the parties as far as possible in the effort to work out some method of joint dealing.

"In view of this Canadian experience, questions are raised with regard to the compulsions in the Wagner Act and the difficulty of enforcing

such a fluid process as collective bargaining through semi-judicial process and penalties. It is pointed out, however, that the Wagner Act, as indeed all legislation of this kind sponsored by the New Deal, is nothing new. Its precursors go back almost forty years to the Erdman Act of 1898, which forbade railroads to discriminate against employees because of membership or nonmembership in trade unions."

The author, reviewing experience in this country, is of the opinion that much of the difficulty in labor relations is due to the "outlaw" status in which for all practical purposes organized labor finds itself, a status which had prompted it to seek such legislation as the Wagner Act. He warns trade unions, however, that this law if upheld may eventuate in agitation for limitations on the right to strike, and other forms of regulation by public authority. Yet employers, too, must realize for far-sighted determination of policy that the Wagner Act itself is in part a product of the restrictions and uneven compulsions long imposed upon the activity of labor.

"The immediate task for government," concludes Dr. Selekman, "would seem to be to free both sides so that they may develop as equals, rather than to introduce the principle of compulsory regulation in so delicate and fluid an area as industrial relationships in the United States today. That principle once established may be extended with dangerous possibilities to all concerned—

trade unions and consumers, as well as employers."

PUBLIC ADMINISTRATION AND THE PUBLIC INTEREST. By E. Pendleton Herring. McGraw-Hill Book Company, New York, 1936, pp. xii, 416, \$3.75. Reviewed by Ordway Tead.

This book is significant and valuable as a fresh orientation of a familiar problem in today's terms. It is concerned with the place and efficacy of governmental agencies in a democracy as they endeavor to implement a public interest as against any narrow group, bloc or minority interests. It poses the question as to how an inevitably growing body of Federal departments, commissions, and *ad hoc* agencies can function in relation to a unified consistent public policy and with assurances of democratic consent and sensitive responsiveness to a public will.

The method employed to state the problem is case descriptions of going administrative concerns such as the Departments of Labor and Commerce, and the Interstate Commerce Commission. The aim is not to elaborate conclusions or proposals so much as it is to portray the weaknesses and difficulties now confronted. But so new are the problems in their total interrelation that even a statement of them is illuminating and suggestive as to lines of constructive attack.

The last chapter generalizes the problems of coordination in a thoroughly satisfactory way, since the point of view is at once finely demo-

cratic and thoroughly realistic. If any qualifying comment is to be offered it is only that one wishes the author might have made some use of the administrative theories and ideas about coördination as they have been developing in the most recent industrial experience in large-scale enterprises.

There is fruitful work of creative thinking to be done in this field. And the seasoned personnel executive and student who have had to ponder ways and means of interrelating staff personnel policies with operating line activities have a genuine contribution to make to the solution of this urgent problem of assuring that a great state operates for truly humane ends.

VISION ET PROFESSIONS. By R. Bonnardel. Paris: Conservatoire National des Arts et Métiers, 1936,

166 pp., 25 fr. Reviewed by Walter V. Bingham.

This volume on Vision and Occupations summarizes a mass of information with regard to the nature and frequency of different kinds of visual defect, and the visual acuity needed in different kinds of work. More than 500 occupations are classified. Those which place a premium on better-than-normal acuity are indicated. Numerous callings are cited which have been successfully followed by the blind, and by workers with one-tenth, four-tenths, and seven-tenths normal vision. Anomalies of color vision are described in relation to their vocational significance. Eye fatigue and occupational hazards to eyesight also come within the scope of this comprehensive study. It should be of value both in vocational guidance and in industrial employment offices.

Today We Are More and More Entrusting the Safety of our Institutions to the Will of the Masses of the People. How Can Business Leaders Adjust to this Situation?

Problems of Industrial Statesmen

Address delivered by

EDWARD S. COWDRICK

at 1936 Silver Bay Conference on
Industrial Relations

ONCE I read a fanciful story about a scientist who invented a machine to capture and amplify minute vibrations in the air and thus reproduce sounds long hushed and bring to life words uttered many years before. I should like to have that machine here today and tune it in on the past eighteen annual industrial relations conferences. What a variety of problems and ideas it would recall! Wartime wages and workingmen's silk shirts; the depression of 1921, which some people thought was the last one we would ever have; labor shortage and immigration restrictions; the fat years of the late 1920's with their hopes for perpetual prosperity; the search for suitable investment for workers' surplus earnings; depression, unemployment relief, the

New Deal—all these swiftly changing scenes have been enacted on the economic stage since the Y.M.C.A. first began assembling industrial people here for detached discussion in surroundings that foster perspective and sense of proportion.

At this nineteenth conference, amid problems as acute as any that have confronted us in the last eighteen years, we are to consider the theme "Planning for Statesmanship in Human Relations in Industry." My part of the task, as I understand it, is to survey the elements of the problem; to trace the tendencies in labor relations, and to point out the influences which are significant for the present and the nearby future. In other words, we are to try to find out, at this opening session, whether there

is anything in the present situation that calls for statesmanship. If there isn't, we can pack up and go home.

At the very outset we should avoid the danger of confusing permanent trends with temporary disturbances; of failing to distinguish between the tide which moves in and out in a steady, predictable course, and the breakers which dash upon the shore with a vast tumult only to roll back and leave things pretty much as they were. To the swimmer fighting the breakers and the undertow, the waves often appear more important than the tide. Nevertheless, from this Silver Bay vantage point, we shall try to take a long time view and to see events, if not precisely in historical perspective, at least with a rational appraisal of values.

Broad Social Trends

It will facilitate our survey if we proceed from the general to the particular—from broad trends in government and society to more detailed developments in labor relations. Approaching the subject from this direction, we mark first a determined progress toward more democracy in government and in society. This is nothing new; certainly it did not originate in March of 1933. Throughout most of its national history America has been a laboratory for the most extensive experiment in democracy ever introduced on this planet. Democracy was not coincident with the Revolution. The Constitution was not intended to be democratic. It would have been rejected if the ver-

dict had been left to popular opinion. The device of the electoral college is only one of the evidences of the deep distrust in which the mass of the voters were held by the Founding Fathers.

Government in Hands of Masses

The experiment in democracy really got under way when the states grudgingly gave up the restrictions which had limited the ballot to property owners—sometimes to property owners who were also church members—and extended it freely to the rank and file of the people. From that time we were committed to stand or fall with the success of popular government. Today the experiment is far advanced. Perhaps it is near the crisis which will tell the world of success or failure. The result—who can tell? Perhaps we shall finally pack up our apparatus and write in our notebook that democracy has failed. That is what they have done in Germany and Italy. Perhaps we shall make some blunder and blow up the laboratory, as happened in Russia. But most of us in America still believe the experiment will succeed; that from the mixture in the retort we can produce a system of democratic government that will justify our refusal to be tempted by European shortcuts.

This trend toward democracy is perhaps the most significant continuing influence upon our whole national development. In putting our government more and more into the hands of the numerical majority, we are entrusting the safety of our institutions

to the will and purposes of the masses of the people. Under genuine popular rule a government cannot for long differ greatly in intelligence, in morality, or in purpose from the voters who put and keep it in power. Moreover, democracy in government cannot long be divorced from democracy in other activities of life. This means that leaders in statecraft and business, in self-defense if for no other reason, must see to it that the masses of the people have opportunities to advance not only their standards of living but also their standards of thinking and their standards of acting.

Collective Adjustments

Another tendency which exerts a powerful influence upon economic life is that toward collective adjustment of mutual relationships. By this I do not mean "collectivism" in any technical or political sense of the term. This tendency toward combination has been fairly steady throughout our national history. At the beginning even the sagacious Washington thought we could get along without political parties. Today we have parties and blocs and factions and pressure groups in every stratum of government. We have corporations and labor unions and fraternal organizations and chambers of commerce and federations of churches. One cause of this development of collective organizations has been the exhaustion of the frontier and the passing of the pioneer period in our national growth. One result of it

has been the strong popular support for methods of social insurance whereby the hazards of life are pooled and paid for out of the collective purse.

In the relations between the public and business the trend up to now has been toward an increasing degree of governmental control. Here again we should guard against the danger of imagining that we have come upon something that is wholly new. At least since the enactment of the first Interstate Commerce Law and the first Anti-Trust Law, business has been forced to submit to progressively more stringent regulation by the government. This process has reached its peak, up to now, in the business philosophy of the Roosevelt Administration, which seemingly aspires to bring economic power completely under the domination of political power.

More Government Control

Encroachment by government upon functions formerly held to be under the control of private enterprise is more than a national trend. It is world wide. In Europe it has taken the form of Fascism and Bolshevism. The totalitarian state of whatever variety has little tolerance for the conception of free industry. The political dictator has become as a matter of course an economic dictator. These new European systems seemingly have attracted the envious attention of some American students of government. There is evidence of a yearning, by both professional and amateur statesmen, to put the foot of

the bureaucrat upon the accelerator and the brake of the American industrial machine.

Our own and future generations will have the task of determining just what degree of governmental control is needed in each new set of circumstances and at what point private enterprise shall be permitted to work out its own destiny. Whatever may be the final verdict of the American people, the present tendency toward enlarged public control over business is an important factor in some of the labor phenomena to which shortly we shall turn our attention.

We might go on indefinitely listing the general trends in politics and economics that have effects, direct or remote, upon the problems of industrial management in dealing with labor. From this point, however, we more profitably can make a frontal approach to the problems themselves. What then are some of the tendencies in the field of industrial relations? Of these tendencies the most important are concerned with four general subjects: income distribution, volume of employment, social insurance, and collective bargaining.

Income Distribution

On the subject of income distribution, the trend is so imponderable and the direction is so undetermined that I hesitate to discuss it in detail. We all know that in a considerable part of the public mind, as well as in certain labor and political circles, there is a demand for a "better" distribution of the gains made by industry.

Some economists endorse this demand, basing their arguments on the importance of a diffused purchasing power. Occasionally one finds a somewhat sinister belief that if a business organization is making a profit—any profit at all—it is a fair target for demands from both labor and consumers. There is much comment—some of it sheer nonsense—about the relative gains of investors and wage earners in the recovery from depression.

Partly as a result of these outside stresses, partly from sincere conviction, many employers are considering the possibility of distributing to wage earners, either in their pay envelopes or through bonuses or profit sharing schemes, larger slices of the industrial income than hitherto they have received. In the three-cornered competition between labor, capital and consumers for the product of industry, capital, now adversely affected by the law of supply and demand, is for the moment in the weakest bargaining position. Unlike labor, it is subject to no protection from sweatshop wages.

In the absence of some major economic catastrophe which would lower the standard of living of the whole nation, the trend of real wages in both the immediate and the long time future probably will be upward. As to the probability of any general adoption of profit sharing for the rank and file of employees, I am not prepared to make a prediction. At any rate, the somewhat uncertain trend in this direction is worth watching.

Perhaps by next year's industrial conference it will be stronger, or will have gone into reverse.

Volume of Employment

In discussing volume of employment, we should first remind ourselves that a labor surplus began to appear about ten years ago and continued through the rest of the prosperous period which ended in 1929. With the depression the numbers of jobless were vastly increased and relief of unemployment became one of the pressing problems of the nation. Such degree of business recovery as we have had up to now has only partially restored the balance between jobs and workers.

It would be futile here to review all the confused and sometimes conflicting statistics that have been advanced to prove one or another thing about unemployment. In many companies and in some whole industries the numbers of employed workers seem to be fully up to 1929 levels. In other occupations jobs still are scarce. The statistical record is complicated by the fact that under present systems of relief and public work many people are listed as unemployed who never would have been heard of in that classification a few years ago. A further complication is contributed by the well-known disposition of some of the jobless to retain their status as wards of the government rather than to accept private employment. But without attempting to analyze the various factors of the problem, we can agree that there are still large num-

bers of our people who, for whatever reason, are without regular employment and some of whom apparently have scant prospects of obtaining such employment in the predictable nearby future.

This growth of the unemployment problem has given strong impetus to the movement toward social insurance which got under way in the early post-war years and which was making modest progress in the late 1920's. The culmination of this movement, up to now, is found in the federal Social Security Act and the state laws enacted in conformity with its provisions.

Social Insurance

I sometimes wonder if many of us realize the profound changes in our personal and community life which are going to take place in the next few years if the principle of social insurance is carried out to its logical conclusion. We and our descendants will have to forget a whole series of inherited notions, abandon customs which have persisted since the first settlement of America, and begin thinking and living in new ways and by new methods. A political revolution of moderate scope might easily produce less fundamental changes in the conditions of American life than will be brought about by social insurance, if we go the full way upon which we have started.

On the industrial side, social insurance, whether under federal or under state legislation, presents new and perplexing problems, both to the em-

ployer and to the employee. Laws are crude and untried, experts disagree about methods and principles, and the cost is so high that it causes dismay even to many sincere friends of the experiment. Many employers have the further problem of adjusting their own private plans to the governmental scheme.

My own opinion is that the United States has set forth irrevocably upon a program of social insurance. Present laws doubtless will be changed as experience or court decisions may dictate, but the principle will be preserved. However much some may regret the passing of the pioneer era when every family was self-sufficient and every settler survived or perished through his own efforts and the bounty of nature, there can be no doubt that the mind of the American people is set firmly toward sharing the hazards of life; that the majority believes modern economic and social conditions call for measures of security which were neither needed nor desired by our grandfathers. In this situation I would counsel the industrialist not to resist the principle of social insurance but to join with his fellow citizens in directing its course toward the wisest and most workable laws obtainable—this for his own protection as well as for that of society as a whole.

Collective Bargaining

In the realm of collective bargaining, events of the last few years have been both heartening and discouraging—heartening because of the inde-

pendence and good sense displayed by the majority of employees, discouraging because of the disposition of the national administration to take sides in labor disputes and to put the power of the government behind the efforts of one form of bargaining organization.

Before the passage of the National Industrial Recovery Act labor conditions in American industry, if not always exactly harmonious, at least were roughly in equilibrium. There was a general balance of power between unionism and rival philosophies, and the employee got the benefit of a continuous competition between labor organizations and the personnel activities of employers. American labor was highly paid, in comparison with that in any other part of the world, and was generally well treated. It was coming to be realized that the interests of employers and employees were more often mutual than antagonistic and that in the remaining areas of conflict all parties could profit by intelligent and cooperative methods of settlement.

Into this comparatively harmonious situation crashed the New Deal. By a series of legislative enactments and governmental regulations the administration sought to coerce employers and to enforce the adoption of methods of adjustment conforming to a single labor philosophy. The result has been discord, retarding of recovery, and the unloading upon the courts of a tangled mass of economic and legal disputes.

To those of us who had had oppor-

tunity to watch the gradual development of confidence and understanding between employers and employees, one of the most discouraging features of Washington labor policies has been the disposition to look upon precisely this confidence and understanding as an evidence of something sinister and suspicious. In some official circles the theory apparently is that the normal relationship of workers and management is one of conflict and that the thing the government has to do is to set down rules for a fair fight. If the workers and management in a particular company don't want to fight each other, that mere fact often is taken as evidence that something is wrong.

Employee Representation

This Washington theory has been manifested particularly in the attitude of the government toward employee representation. From the enactment of the National Industrial Recovery Act to that of the Wagner Act, Congress and the various enforcement boards apparently accepted the philosophy that collective bargaining can be conducted only through a formally constituted organization of wage earners. Thus in the official Washington mind employee representation means something that originally it was never intended to mean: a formal organization to which an employee belongs or does not belong, and which is—or ought to be—set up wholly independent of the employer and preferably somewhat against his will.

Employee representatives who appeared before Congressional committees during consideration of the various Wagner bills were perplexed by such questions as: "What is the membership of your company union?" or "How often does the company union meet?"

It seems futile to attempt to explain to the ordinary official mind that employee representation typically is a voting franchise rather than a membership organization; that its functions, while including collective bargaining, are broader and more constructive than the mere adjustment of differences, and that the very term "company union," at the time when Congress borrowed it from those who had invented it as a contemptuous epithet, had little accuracy as a description of the vast majority of representation plans.

The theory of conflict in labor relations is nowhere better exemplified than in the National Labor Relations Act, which undertakes to outlaw all collective bargaining which does not conform to the pattern of two opposing forces organized for battle.

Employee representation thus far has withstood with fair success the combined attacks of organized labor and the federal government. Employees have shown a disposition to choose for themselves the form of collective bargaining which they have preferred and to be resentful equally of coercion from employers and of coercion from outside sources. Employee representation is coming to be less an employer's movement and

more an employee's movement. In many companies it is being maintained vigorously by the independent action of wage earners themselves.

Organized Labor

Within the ranks of organized labor the results of the new governmental theories of collective bargaining have been significant. At first many labor leaders accepted enthusiastically the aid of the government, apparently expecting a rapid unionization of industry under the favoring sponsorship of the National Recovery Administration. Then came suspicion that the unions could not reap the benefits of governmental regulation of industry without danger that they would be regulated themselves. Some union officials, more farseeing than their colleagues, began to have doubts as to the desirability of an alliance with government, warned perhaps by the recent history of trade unionism in Italy and Germany. There is in fact ample reason to believe that if the unions should succeed ultimately in organizing American wage earners with the aid of the government they would find themselves rigidly controlled and without the freedom of action which heretofore has been one of their most cherished privileges.

What is to be the outcome of the present jumbled situation as to collective bargaining? Frankly, I don't know. Neither—with all respect to those who think they have the answer—does anybody else. My per-

sonal opinion is that relations between employers and employees will be adjusted by progressively more collective methods. This is in line with the fundamental trend toward collective adjustment of all relationships in our society. But as to the form of machinery that ultimately will emerge, only the rashness of inexperience would warrant confident prediction. Possibly either labor unionism or employee representation will come to be universally accepted, to the exclusion of all other methods—possibly, but I doubt it. It may be that gradual evolution through trial and error will produce some synthesis that will embody the best features of existing procedures. Certainly the situation is one that calls for good sense, for statesmanship—in the word of your program title—and for a combination of patience and firmness, if the present discord ever is to be harmonized.

Among the encouraging factors in the labor situation is the increased attention to industrial relations that is being given by executives and supervisors of all ranks. The last two or three years have seen a noteworthy acceleration of the process by which the best efforts of industrial management are being directed toward personnel administration. Just now there is a revival of interest in foreman training, and to a considerable extent this is due to a realization that intelligent and informed foremanship is a necessity in meeting the labor needs of post-depression industry.

Statesmanship in Industry

We have considered some of the conditions which call for statesmanship in human relations in industry. We have hastily surveyed a field in which there is much present confusion and obscurity and some reason for solicitude as to the future. In the face of these problems, what should be the attitude of industrial management?

First, I would urge the importance of an open mind. The man who cannot meet a new idea with equanimity is due for many shocks in the next few years. We should try to get into the mood of considering unfamiliar suggestions on their merits and not on the basis of our inherent or environmental habits of thought. We are too prone to think and speak in slogans and labels and to discuss each other's views in epithets. While there is value in stabilized principles there is danger in mental rigidity. Let us not be too eager to force everything into classification. Why, for example, should one consider himself either a radical or a conservative? Is it not better simply to say that we are radical about the things we think ought to be changed and conservative about the things we think are best let alone?

Along with the open mind the industrial leader should have a long range point of view. He should train himself to see things in perspective. He should be able to realize that some of the things that are worrying him

may not be permanent trends after all; that many of them probably are temporary. It is a good idea occasionally to stand off mentally at a distance of about 100 years and view our present struggles and worries in their future historical setting.

The business man also should try to limit the area of conflict. One way to judge the degree of our civilization is to count up the number of things we think are worth fighting about. If we are really civilized there should not be so very many. Fighting is the most laborious and the most wasteful way of settling most of our apparent conflicts of interest. Having determined whether, if anywhere, there is a real battle field, we should try to make our contest intelligent and effective, not merely sullen and resentful. In some non-industrial circles business men are criticized for doing one of two things: meekly submitting to every attack which they think has political potency, or stubbornly resisting every progressive movement which they fear may unsettle old economic foundations. There are times when a militant stand is wise and necessary. There are other times when the business man may prudently consider the Biblical injunction about counting one's soldiers before going out to battle with a king who has a superior army. There are still other times when both patriotism and self-interest dictate a policy of coöperation in activities that are genuinely progressive. We are in a rapidly moving

world. He who cannot move with it is like a boy who tries to stand on an escalator without going up or down; he uses a vast amount of energy in trying to stay in one place.

From the standpoint of industrial relations one of the most important qualifications of a business leader is the realization that an effective labor program is more necessary today than it ever has been before. The importance of personnel administration, far

from having been lessened by the events of the last few years, has been vastly increased. The more critical nature of the problems requires more expert leadership for their solution. Upon the quality of statesmanship with which labor relations are adjusted, now and in the next few years, will depend in large measure the success with which American institutions emerge from the difficulties which now surround them.

How a Public Utility Solved the Problem of Keeping a Check on Hourly Employees Working on Varied Jobs, not under Immediate Supervision.

Service, Production, and Quality Records

By G. C. Pritchard

Philadelphia Gas Works Company

THE introduction, by our company, less than a decade ago, of gas appliances equipped with automatic regulating devices imposed on our Service Division, within a short period of time, an entirely new and difficult problem. It became necessary to keep a closer check than ever before in order to provide adequate data regarding errors in service.

The service division is composed of five units; namely, meter and piping maintenance, general appliance servicing, general installation, refrigerator servicing, and house heater servicing. Training has permitted, to some degree, the interchange of men within the several units. The work includes:

1. Installing gas appliances, gas meters and necessary gas piping.
2. Inspecting gas appliances on request of consumers and making needed repairs and adjustments.
3. a) Turning on and shutting off gas; also changing meters.

- b) Making turn-on tests to check house piping and appliances; adjusting appliance burners.
- c) Repairing minor defects in meters.

Check on Service

In order to maintain the necessary check on efficient service it was decided to record incidents of importance in the work-life of servicemen, such as,

1. Vehicle accidents.
2. Public Property Damage, caused by automobile accidents on the street, or by miscellaneous damage to household effects while working on customer's premises.
3. Public Personal Injuries, resulting from automobile accidents, or through an oversight in repairing an appliance.
4. Unfinished work after pronouncing a job satisfactorily completed. These are usually very minor in nature, so slight as to make it difficult for others than skilled workmen to detect them.
5. Complimentary letters from customers for service rendered.
6. Complaints from customers that may result in unsatisfactory public relations.
7. Outstanding service either in line of duty or to the community at large.

Current reports, covering the above, are sent to the personnel record file of the workman concerned. The entire record is reviewed immediately by the Personnel Department to ascertain whether similar reports have recently come to file. If so, a complete record review is sent to the service division, where it is discussed by the foreman and the workman concerned. Additional training and sound counselling often result in improved workmanship.

of Jim's foreman was taken lightly and although a good workman, it was necessary eventually to transfer him to work which did not involve contact with the public. Satisfactory relations with customers are vitally important in any business if good will is to be maintained. And the important point is that to the customer, a serviceman like Jim, *is the Company!*

A running record of the foregoing information is maintained by the Per-

FIG. 1

SIX MONTHS

SUMMARY RECORD—SERVICE DIVISION

Payroll Number	Name	Vehicle Accident	Public Prop. Damage	Public Pers. Injury	Miscellaneous	Complimentary Letters	Remarks
	Adams, Harry		1			1	
	Belmont, William	1					
	Cassidy, John				1		Listed for transfer.
	Daly, Maurice						
	Emerson, James		1				
	Ferguson, Walter	1					
	Gordon, Frank			1			
	Hubbert, Joseph				1	1	

Occasionally, it becomes necessary to transfer workmen to other duties. For example, take the case of Jim Jones whose record indicated unsatisfactory customer relations. He had used poor judgment in annoying a customer by calling on him at his place of business rather than at the home address; on several other occasions he had jokingly addressed customers in a careless manner. These and other incidents brought complaints to the company. The advice

sonnel Department, and at the close of each six months period, a statistical summary prepared and turned over to Service Division Foremen in report book form—(see sample sheet Fig. 1).

We have found the follow-up method just described to be of great assistance to the service division by keeping its several foremen currently posted regarding "weak links" in their organizations, thus enabling them to take immediate action to

bring about more satisfactory performance.

Up to this point, only part of the story has been related, and we must look a step beyond for a still more effective method—Production and Quality rating scales.

After each six months period we now show a report combining all data—(see sample sheet Fig. 2). This is submitted in report book form to the service division.

1. The travelling time of workmen is not comparable because.

- a) Certain men travel greater distances between jobs.
- b) Different modes of transportation are used.
2. Conditions vary widely in customers' homes.

In addition to time study, actual performance records were taken into consideration, and eventually a weighting factor was established for each type of work performed by the Service Division. This is illustrated in Fig. 3. For example, it will be noted that the weighting factor oppo-

FIG. 2.

SERVICE DIVISION—Employee Ratings.
Six Months Summary

Payroll Number	Name	Force	Vehicle Accident	Public Prop. Damage	Public Pers. Injury	Miscellaneous	Production				Quality					
							Complimentary Letters	Total Jobs		Jobs per Hour	Group	No. of Faults		C% Faulty Work		Group
								Ref.	Other			Ref.	Other	Ref.	Other	
	Adams, Harry	MPM		1			1	500	.66	4		19		3.8		5
	Belmont, William	MPM	1					1039	.77	2		12		1.2		4
	Emerson, James	MPM			1			1205	.78	1		11		9		3
	Gordon, Frank	MPM		1				865	.62	4		7		.8		2
	Jones, W.	MPM	1					1169	.91	1		5		4		1

Production Records

While the records discussed above in this paper were proving their worth, an attempt was made to effectively rate each worker on his productive effort. Certain standards had to be established, and operations necessary to perform each job satisfactorily were made more uniform.

Informal time study was followed as a partial guide in determining what constituted a satisfactory day's work. Certain factors, however, made it difficult and unwise to rely on this method entirely. Examples:

site the item "New Sets" is 1.0. The standard therefore is one job per hour. Farther down the page the item "Deliveries" has been assigned a weight of .5, the standard being two jobs per hour.

Production is recorded daily for all workmen and each half-month total jobs in each type of work are multiplied by the weighting factor [Fig. 3]. These results are added to find the total weighted jobs, which figure (76.2 in the example) is divided by the total hours (80) worked during the period in order to find the indi-

vidual workman's "average weighted jobs per hour." The latter result (.95 in the example) constitutes his production index for the half-month period. It is entered in Column 5 of the "Individual Rating Record,"

(Fig. 4) opposite the second half of August. At the close of six months, totals are taken and that of Column 3 is divided by the total under Column 2; the result, (.91) gives us the workman's production index (aver-

FIG. 3

WORKMAN'S INDIVIDUAL PRODUCTION RECORD
Form 45 66020 3M 2-10-36

Type of Work	Name <i>W. Jones</i>																Period <i>8-16-35 to 8-31-35</i>			
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Jobs	Weighting Factor	Weighted Jobs	
New Sets																	1			
Appliance Repairs				3		1		1		8			1			6	2.0	1	20.0	
Automatic Appliance				7	3	3		3				4	5	7		5	37	.8	29.6	
Refrigerator Adjustments																		.8		
Pump Service or Fuel Line																		.75		
T. O. or Change of Name				1													1	.5	.5	
Old Sets and Ordinary Changes					1												1	.5	.5	
Miscellaneous													1				1	.5	.5	
Space Heater or Other Non-Auto. Range & C. W. H.					3	8		4				5	2	1	7		30	.5	15.0	
Deliveries					1			1				1	2	1		1	7	.5	3.5	
Age in Service Changes					10			4				2	2			2	20	.33	6.6	
Meter Removes																		.33		
S. O. & G. C. H. T.																			2	
Total Jobs				11	18	12		13		8		12	13	9	12	9	117		76.2	
Hours Worked				8½	8½	8		7½		7		8½	8½	8	8	7½	80			
Weighted Total Jobs																		76.2		
Average Weighted Jobs per Hour																		5.95		

(Fig. 4) and may be checked immediately with that of other servicemen if the foreman desires. Total jobs (117), total hours worked (80) and total weighted jobs (76.2) are posted to Columns 1, 2, and 3 respectively

age weighted jobs per hour) for the six months period.

Rating Schedule

The individual rating sheets are then segregated by service units, and

"average weighted jobs per hour" indices are listed on a sheet ranging from the lowest to the highest and

group with regard to production. For example, W. Jones' index (.91) places him in Group #1.

FIG. 4
INDIVIDUAL RATING RECORD

Period—Second Half—1935				Name: W. Jones		
Semi-Monthly Period		(1) Number of Jobs	(2) Hours Worked	(3) Weighted Jobs	(4) Number of Faults	(5) Semi-Monthly Prod. Index
July	1st	101	86	80 0	0	93
"	2nd	82	79	74 3	1	94
August	1st	125	80	77 6	0	97
"	2nd	117	80	76 2	0	95
September	1st	62	78	60 0	2	86
"	2nd	94	80	69 5	0	87
October	1st	89	75	60 0	1	80
"	2nd	96	84	79 8	0	95
November	1st	87	86	74 0	0	85
"	2nd	120	80	76 6	1	96
December	1st	103	79	75 0	0	95
"	2nd	93	80	72 0	0	90
Total		1169	967	882 0	5	
Index for Period				91	.4	
						(5 ÷ 1169 = .4)

classified into five groups. It is then possible to build the following:

Production Rating Schedule

Group #1	.85 to .91 inclusive	—Very Good
" #2	.72 to .77	—Good
" #3	.68 to .71	—Satisfactory
" #4	.61 to .67	—Poor
" #5	.43 to .60	—Very Poor

It is a simple matter next to refer to each workman's rating record (Fig. 4) and determine his standing in the

Quality ratings in this case are negative—based upon the number of faults recorded for each man during the month. It is necessary to proceed along this line chiefly because repeated "call-backs" to complete jobs not properly finished would not only be uneconomical but would provide grounds for considerable customer annoyance.

Quality Records

For example, if a man is called to a house to adjust the burner on a gas refrigerator, he is given an order with instructions on it. When he returns after completing the job, the order slip is "signed off" and filed. If shortly afterwards the customer complains about the working of the refrigerator, that is called a "call back."

A word about the recording of faults will suffice to explain the procedure. Reviewers, who comprise part of the service division's supervisory staff, and who are experts on each servicing operation, analyze and list the faults. As service requests are received, the customer's address is checked against the file of "signed-off" or completed orders to discover whether the new request is occasioned by a recurrence of the same trouble. If this is so, the reviewer originates a recurring complaint slip, which indicates in detail the type of fault. At the close of each month these slips are totalled and entered on the individual rating record (Fig. 4). Immediately following this entry, slips for workmen whose individual rating record shows four or more faults for the month are sent to the service division foremen who review the mistakes with the men concerned giving them advice and further training if necessary.

At the end of a six months period, the total faults are divided by the total jobs (see Fig. 4 under "Re-

marks") and a percentage of faulty work obtained. Following the same method used for determining grouping under production, percentages of faulty work are arranged from lowest to highest with the following result:

Quality Rating Schedule

Group #1	1 to .5 inclusive	Very Good
" #2	.6 to .8	—Good
" #3	.9 to 1.1	Satisfactory
" #4	1.2 to 1.5	—Poor
" #5	1.6 to 3.8	—Very Poor

W. Jones, with .4 per cent faulty work falls within the first quality group.

Value of Production and Quality Records

1. Provides facility for measuring standards and maintaining good service to the public.
2. It is an objective method of rating employees.
3. At the end of one month foremen are able to "spot" and give assistance to men whose records are below normal.
4. Such records are valuable in watching the progress of new employees. Apprentices, for example, are found at the start to be in the fifth groups for production and quality. Later they will advance to the third or fourth quality groups and remain temporarily in the fifth production group. This is a healthy sign for quality is not suffering; we know that speed is generally achieved in good time after the apprentice gains practical experience and familiarity with methods. Eventually he finds his place in one of the three top groups.

5. Without question these ratings prove a valuable adjunct to promotions and to salary increases for they point to men whose performance makes them deserving of consideration.

6. Occasionally mechanical defects in appliances are discovered. Although this is not the principal means of discovering defects in construction,

expert reviewers did help solve complaints about gas refrigerator temperatures which had resulted from an improperly located thermostat.

These constitute advantages which have been outstanding since the system has been in operation. It has been especially helpful to foremen in providing them with something with which to check subjective judgment.

The Personnel Manager's Job is not to Represent Employees to Management or Vice Versa, but to Aid in Developing Machinery for Mutual Understanding.

Personnel Work *and* Employee Representation

Extracts from an Address by
CHARLES S. SLOCOMBE
Personnel Research Federation

IN DISCUSSING the subject of employee representation, I should like to consider it from a broad point of view and regard it as any means by which employees' views are brought to the attention of management or of higher supervisory officials.

Employee representation has come to refer only to so-called company unions, or organizations of employees within particular companies, and not affiliated with the American Federation of Labor or other trade unions. Representation of this type or that obtained through organized labor unions is essentially for the purpose of collective bargaining, through which the employees obtain or seek

to obtain concessions in such matters as wages, hours, etc.

But there are other matters vitally concerning employees, which while broadly related to collective bargaining, are often not taken care of by the usual representation machinery. I propose to discuss some of these matters.

A Strike

The case of a company which became involved in two strikes well illustrates different features of employee representation which might be developed, and the relation of the personnel department to them.

This company has approximately eight hundred employees. It had

two factories in a town in one state and a branch factory in another state. In 1933 it was decided to concentrate its factories under one roof in the city where most of its work was.

During the course of changing over so that all the operations were done in the same factory, normal production was very low. There were only four hundred employees engaged and even those four hundred employees had a very small amount of work each. Work was done on piece rates, and the company tried to divide the work as much as possible.

Due to the spreading of work the average wage for the plant dropped to less than \$7 a week, even though wages were at the rate of 75 or 80 cents an hour. Some employees, because the work was not evenly split, were receiving only 65 cents as a result of their week's work. They came to the factory every day hoping that they would get work.

If this matter had been put to the employees, would they have preferred this thin spreading of work and wages or would they have decided that a proportion of employees should be temporarily laid off, so that those remaining could earn a living wage? This question was of comparative indifference to the Company, but of high importance to employees. Their views on the subject might well have been ascertained. Meanwhile three or four hundred tool makes, millwrights, and other skilled tradesmen were employed to do the necessary work of changing over the factory.

Then came NRA with much talk about collective bargaining, increased wages, and so forth. Then all the employees walked out. They went on strike, demanding an eight-hour day, a 25% increase in pay, and other things that are demanded in such cases.

This factory happens to make parts which are required in a certain other industry, and that industry demanded that they be supplied with the products from this factory. Finally under pressure to stop the strike, the president agreed to the formation of a union, lasting for a period of six months.

The strike was over—the employees came back and by that time more work was available for them, because the work had been brought down from the other state. At the end of the six months, the company had to decide what to do about renewing the union agreement. The president of the company decided to throw the union out, which he proceeded to do.

Strike Broken

He absolutely refused to negotiate with his employees on any basis whatever. If they didn't like it they could leave. The employees refused to work under such conditions—so they struck again. This time the president decided that he was going to open his factory with non-union employees. And if his own employees wanted to come back, they could come back under his conditions. If not, he would not have

them back, agitators he would not have.

He had about 400 police around his plant to keep the picket lines in order, and to let through the workers who would work under his conditions. There was rioting and bloodshed. People were being thrown into jail at the rate of about 40 a day. Thirty or forty people would be sent to the hospital in one afternoon. Employees and picketers and strikebreakers developed a nice turmoil.

After twenty weeks the president notified his old employees that he would give them a week to come back. Those who did not come back would not be employed by him any more. Two hundred and fifty of them came back. Then he had about 750 employees and the strike was over. He has no form of employee representation.

I have described this case because it illustrates so well the need for some means by which employees can bring their viewpoint to the attention of high officials. There is little doubt that had such means existed the loss, suffering and bloodshed caused by this struggle would have been avoided.

Goodwill on the part of a company president or high official is not sufficient. The office of the company president in this case was located in New York, and he had no means of learning the view of his employees. Employees could make their needs known to the factory manager, but he was a tough individual who be-

lieved in making workmen take what conditions were offered, perhaps being forced to this position by the demands of the President for economical operation.

Personnel Man Cannot Represent Workers

A personnel manager cannot effectively represent employees. The only method which existed in the plant was for the employees to take their troubles to the personnel man. The personnel man apparently did his best to inform the manager as to what the employees thought. In the absence of other means, he took up the case of the employees and tried to get the situation remedied. He failed to do so.

When the employees went out on strike and proceeded to riot, the first man's house that they attacked and where they did the most damage was that of the personnel manager. He had tried to do his best for the employees, but because he failed to secure remedies for their grievances, somehow or other the employees got the impression when he took their case up with the management, he had double-crossed them. So when they started to throw bricks, his was the first house they went to.

I recently read an article in which it was suggested that a personnel manager actually is in certain respects the labor leader. He takes up matters on behalf of the employees with the management—where there is no organization or even sometimes where there is an organization.

This is not the right position for a personnel manager to be in.

In the above case the personnel manager earned the illwill of employees, in another case he became unpopular with management.

Personnel Man in Difficulties

In a certain company in New York State where they have an employee representation plan, the employees and the management have had a sickness benefit plan, in which the employees paid a certain amount each month out of their wages toward the sickness benefit. The officials of the company in looking around to see where they could save money, found that this benefit plan was not paying for itself. The employees were not paying their share.

So at a Board of Directors meeting it was decided that the employees should pay more. The employees had been paying 85 cents a month, it was decided that they should pay \$13.80. This was to be done without any question of the employees' permission or otherwise. The personnel director attempted to tell the Board the effect of this on the employees. He suggested that the Board of Directors should not change contributions without consulting the employees.

A vice-president of the company said, "No. Why do we have to talk with our employees about these things. The employees will have to pay." By arranging meetings of the employees' committee and the management, the personnel director finally was able to arrive at a com-

promise in which employee contributions were raised to \$3.80, the company paying the other \$10.

That personnel director at the present time is battling for his position because he did something on the behalf of his employees which a vice-president did not like. The vice-president was promoted to a more responsible position, and is now seeking the dismissal of the personnel man.

Thus, though one could make out a good case for saying that the personnel department's job is to understand what the employees' conditions are and bring them to the attention of the management. But there are dangers in such situations, and it is really far better for employees to negotiate directly with the management. Then the personnel director stays out of a position where he is liable to be squeezed between two stones.

Training Workers for Representation

Returning to the company which had the strike we find at the present time no form of employee representation or organization. There are in the organization over 500 strike-breakers, as regular employees. These people came in to break up a union, and they are all anti-organization men. At present it would be a most difficult job trying to get those people to work together in any form of employee organization. But a start might be made by stimulating the organization of bowling clubs, glee clubs, benefit associations, credit

unions, or other means to mold the employees together in a group so that they could learn how to work together. This is an essential preliminary step in training employees in the art of organization and representation. Here is the place where a personnel manager can do very useful service for employees.

In talking to the president, I said, "The situation is quiet now, but what might happen if the employees became dissatisfied? Suppose the cost of living goes up and the general wage rate rises around you, what would you do?" He said, "I would have to depend on my own judgment. I hope I won't make the mistakes I made last time."

There is thus definite need in the company for some planned means by which the thoughts and ideas of the employees can be made known to the management. There might be a union, or a form of employee representation, but in view of the character of the employees neither is likely at present. Perhaps the best thing would be a form of planned group discussion by means of which ideas filter up and down through the organization.

Pyramid Meeting Plan

In a street railway company, (which is completely unionized), every Monday morning, the general manager has a staff meeting with the heads of his departments for discussion of policies and practices. The department heads inform the general manager of the effect of his proposals

on employees and the organization so that policies are always related to employee reactions. As soon as this meeting is over, the general superintendent of the transportation department would bring in his four or five district superintendents. He would talk over with them what had been decided in the general manager's office and receive comments on expected employee reactions. Later each superintendent would bring in his supervisory force, and they would talk over the matters as affecting them and employees. These discussions down the line are reported back to the general manager through the regular meetings.

These discussions of superintendents and supervisors were found to bring out very well what employees think about their working conditions, about their wages, and about operating conditions within the company.

Wherever there was any unsatisfactory condition, where the employees were dissatisfied with their supervisor, or with the way the schedule was laid out, or with their hours or the assignment of their work, complaints of employees' work and employees' complaints of management organization and planning had a means of being aired.

This is not employee representation in the ordinary sense in which we speak of it, but, I think that by this means you can get the employee viewpoint. This will make for efficiency in organization, will bring to the attention of the higher officials any

dissatisfactions that there are, and generally under certain circumstances is an excellent form of set-up. It would seem at present to be the best machinery for employee representation for the company which had the strike. The personnel manager would do well to spend his time building a set-up of that description, rather than putting himself in between the men and the management. Any form of employee representation requires management, if it is to be in the best interest of employees and the company.

Policy Causes Difficulties

The personnel manager of a charity organization came to see me a few weeks ago because of difficulties in the organization. Apparently they had a workers' council, and the personnel manager wanted to know what she should do in the light of employees' demand for increased pay.

A 10 per cent cut in pay was restored last year, and this year the workers' council are again asking for more pay. The employees were told that down in Wall Street, and in banks employees had received no over all increase. Their reply was that their employers were a charity organization, which had to take into consideration human feelings. The employees' council used this argument at all times, and this view seriously affected discipline and work. Consequently there were problems of absenteeism, standards of work in the organization were low and the employee morale was bad.

Certain personnel policies really created the difficulties with the workers' organization. And the problems could not be solved so long as those matters of policy existed.

There were two things, (a) it was the policy in the organization to pay above going rates in the community for equal work, and (b) as girls who married continued to work there was no labor turnover. After a girl was hired she received her raise of \$2 every year or six months, until she reached the top of her scale. Then, she could go no further. There being no room for promotion in the organization, because of the second point I mentioned, and her salary scale being already above the rates in the community, she must continue in the same job, sit doing the same work, and yet wanting more money, because of a natural desire for promotion and advancement.

The employer, in this case the charity organization, was as liberal as possible, but the two faults in personnel policy made employee dissatisfaction inevitable, no matter how liberal they were. The situation could be improved only by changing these two personnel policies.

There was no chance for promotion in the organization and the girls could not go outside without taking a loss. The Board of Directors could not continue to give employees raises and promotions such as they knew individual employees were getting in other organizations, for they were already paying high wages. Furthermore they believed the money

taken into the organization should be spent as much as possible on poor people, and not on the employees.

This case shows how if you have an employee organization and the employees are not satisfied with conditions, with their wages or working conditions, some times it is not due to any hard-heartedness on the part of the management of the business but to some situation which has been created by general policy. It shows that if you have an employee organization, you have to have somebody to manage it.

For instance, if the personnel manager, who came in to see me, had seen what the real cause of the trouble was, had it explained to the workers' council, and asked them to decide, whether girls who married should be separated from the organization, whether new girls should be hired at going rates for the community, or in what other ways they would like the organization opened up for promotions and advancement, then the representatives of the employees could intelligently decide what they wanted. No positive recommendations from the employees, as to how to settle the problem, could be expected without prior analysis by the personnel manager.

Few Constructive Contributions

Employee organizations do not make significant constructive contributions to management. This last example illustrates something which is commonly found in employee organizations and that is, that employees

will bring pressure for improvement of their own immediate conditions, but most of the time, they have not a sufficient grasp or understanding of the problem to themselves make any constructive contributions to a solution of the difficulties they want corrected.

The best example of broad employee coöperation that there has ever been has been in the work of the Amalgamated Clothing Workers in Chicago under Sidney Hillman, with the assistance of people of the brain-trust order like Leo Wolman, William Leiserson, and Earl Dean Howard. But in business and industry generally, employees do not make significant contributions, except under the stimulation and encouragement of personnel manager or his equivalent.

Summary

Summarizing the points brought out in regard to employee representation in industry, we have seen, how a strike may develop through failure to consult employees on matters that vitally concern them, and why a personnel department is not an effective means of bringing employee views to higher officials. We then saw how the personnel department may assist, through organizing of planned conferences, by training employees to work together, by analyzing personnel problems for the consideration of employee committees and by stimulating organized employee coöperation.

The instalment purchaser is easily exploited because of his gullibility, his ignorance of instalment selling mechanics and the law, and the greater bargaining strength of the seller.

Interest Rates *in* Instalment Buying

EXTRACT FROM REPORT OF
THE COMMITTEE ON CONSUMER CREDIT
Commonwealth of Massachusetts

Editor's Note. Because employees are ignorant in making instalment purchases, they sometimes have their wages attached, and otherwise become financially embarrassed. We here present information on this subject for the benefit of personnel directors, who may wish to inform their workers. Where credit unions exist, employees might sometimes be advised to borrow from the credit union, and pay cash for their purchases.

MOST instalment sales transactions are complicated. Usually, the consumer learns little more than the bare details of the payments he is obliged to make; and the salesman, often himself ill-informed, is hard put to it to teach customers what they need to know in order to shop for credit intelligently. The merchant, in any case, should be and usually is primarily concerned with selling goods, not credit. In consequence, he often concentrates his attention on his merchandise and treats credit terms as a mere incident.

Possibly this attitude would be harmless if the customer could tell

the nature of the obligation he was asked to assume without carefully digesting the voluminous fine print of the instalment contract and analyzing the dollars and cents figures. But there are no such conditions. The complexity of instalment transactions discourages the consumer from attempting to find out the essential facts and exposes him to numerous abuses.

On the basis of origin, abuses may be classified in two main groups: (1) abuses motivated by business expediency; and (2) abuses which result from deception and fraud.

Abuses from Expediency

In the depression consumer credit proved to be one of the soundest and most profitable forms of credit. The basic reason is that a great majority of consumers are both honest and capable of meeting the obligations which they assume. This alone, however, does not account for the business success of instalment sellers; it is partly the result of ingenious legal safeguards and highly perfected administrative techniques. Were it not for the techniques of administration and collection and the legal devices with which the business protects itself, conversion and default by undeserving borrowers would lift expenses to prohibitively high levels, even in prosperous times. Special protection for the seller is necessary, therefore, if consumers are to obtain credit at reasonable costs.

Nevertheless, contracts which take away the consumer's usual rights under the law and give the seller power to repossess goods in which the purchaser may have a substantial equity, or to collect the customer's wages, or to impose unlimited fines and extra fees for minor irregularities, open the door to exorbitant charges and outright fraud. Even sellers and finance companies which ordinarily are scrupulous in their dealings with customers are tempted to salvage whatever they can from hardpressed debtors by the quickest and cheapest available means, especially since lenience on the part of some creditors might mean that the creditors who showed no mercy would get all the

debtors' money. The resort to the available means of collection, aided by the harsh powers reserved in the contracts, often works hardship and injustice on debtors.

Bankruptcies Among Consumers

The scramble of some creditors for what little money the debtor has results not only in persecution of the debtor, but in losses of lenient creditors and of the general public. In "Causes of Bankruptcies among Consumers," a study which covered the 266 consumer bankruptcies that occurred in Boston between November, 1930, and June, 1931, consumer bankrupts were divided into four main classes:

1. The strictly fraudulent bankrupt.
2. The extravagant bankrupt, who is not actually dishonest, but contracts debts without justification or regard for his ability to pay.
3. The honest but unfortunate bankrupt, who is overburdened with debt and cannot pay.
4. The honest bankrupt, temporarily embarrassed by creditors, garnishments, or attachments, who could pay if given time, but once faced with bankruptcy frequently disregards his moral obligations.

According to this study, the commonest cause of bankruptcy was extravagance. We cite two cases:

No. 836. Although the bankrupt in this case had an income of only \$100 per month upon which to support a wife, two children, and a mother-in-law, he was able to purchase a piano, furniture, a refrigerator, an automobile and clothes for the entire family on the instalment plan. The piano company, which sold the

bankrupt a \$200 piano—\$5 down and \$5 a month—refused to take the piano back when informed by the bankrupt that he could not pay, and secured an attachment on his wages for the balance of \$675. A bankruptcy discharge was the only available means of removing the attachment and of retaining his job. Liabilities amounted to \$1,190 and there were no assets.

No. 703. The total amount of merchandise bought from retail stores on credit during the year preceding bankruptcy exceeded the \$1,500 annual salary received by the bankrupt by over \$1,000. The bankrupt stated that he had bought more than he could pay for, but blamed the high-pressure selling methods of various retailers for his plight. Clothes, furniture, jewelry, an automobile, and various other articles were bought on the instalment plan. Two loan and finance companies were scheduled as creditors. The bankrupt was steadily employed and had no medical or other unusual expenses to pay. Liabilities were \$7,754; no assets.

The Committee believes that credit grantors should not be permitted to rely primarily on the use of harsh legal instruments as security for loans and credit extensions. They should be restricted in such use, as inducement to them to place main reliance on the debtor's total credit position. Ability of the purchaser to assume an additional debt, rather than ability of the seller to obtain a prior lien, should be the determining factor.

Fraudulent Abuses

In considering fraudulent abuses it is important to distinguish between those which are frequently used by a large number of sellers and finance companies and those which are used by relatively few. The Committee here considers those abuses which are practiced by many grantors of credit because such abuses injure the largest number of purchasers.

Hiding of the true rate. Outstanding among abuses is the hiding and misrepresenting of the true rate. Each

dealer is free to use any method of stating the charges which he can devise, and great ingenuity is shown in devising methods which make the rate appear lower than it is. The survey conducted by the Special Commission established by the Massachusetts General Court includes about 500 cases gathered in 21 Massachusetts cities and towns. Among these cases, the rate most frequently used as a basis for quoting charges is 6 per cent, but the actual rate, calculated on the average amount of credit extended, varies between 6 per cent and 679 per cent.

Need of Education

A number of questions were considered in the light of social need, legal implications and practical remedial expedients. A recommended bill embodies the results of this deliberation. The Committee knows that legislation can do little more than provide rules for the game and possibly a referee. Satisfactory performance can be assured only by a thorough knowledge of the game and fair play on the part of the players.

Consumers need to learn: (1) the risks involved, including the risk of not being able to meet payments promptly; (2) the sacrifices incident to failure; (3) the true costs of credit; (4) the different credit sources; and (5) the moral responsibility of debt.

Lenders need to learn: (1) that the excuse for instalment credit is im-providence of consumers or their inability to accumulate savings against large purchases, so that it behooves

sellers to refrain from pressing consumers into contracts which reduce them to destitution; (2) their responsibility as budget counsellors; and (3) the business value of fair dealings.

We repeat. Useful, universal education in this field is a crying need. Public schools, with a few notable exceptions, have so far missed their opportunity.

Survey Yields Data

In order to discover the size and nature of instalment credit charges in Massachusetts the Commission undertook to study the matter at first hand. No ready-made data were available. Moreover, a simple perusal of a few plans and rate schedules was deemed insufficient for a comprehensive and accurate picture. Accordingly, information was obtained by means of a field survey.

Data on prices and instalment credit terms were obtained directly from salesmen or credit managers. The terms in nearly all cases are those suggested by the sellers, and to this extent may be considered as typical for the commodity and the store sampled.

The comparison in each case was between the cost of buying for cash and the cost of buying on the instalment plan.

The Commission found it necessary and advisable to employ some uniform means of comparing the costs of instalment buying, in order to measure the effect of what are often complex details of dollar charges, per-

centage charges, down payments and irregular periodic payments. For this purpose use was made of an annual *cost rate*. The cost rate, as in the case of an interest rate, may be found by dividing the credit charge by the average amount of credit extended for one year; for example, if a purchaser paid \$6.50 for the privilege of financing a \$120 balance over a twelve months' period, he would receive, on the average, \$65 for a full year (\$120 the first month, \$110 the second, \$100 the third month, and so on, down to \$10 in the last month, averaging \$65 for the whole period), and \$6.50 divided by \$65 would give the cost rate of 10 per cent.

The formula used for computing is as follows:

$$\text{Annual rate} = \frac{2 \times (\text{ratio between 1 year and period of repayments}) \times (\text{total charges})}{(\text{Original unpaid balance}) \times (\text{number of instalment payments} + 1)}$$

In the illustrative case above, the computation is:

$$\text{Annual rate} = \frac{2 \times \frac{12}{120} \times (6.50)}{120 \div (13)} = 10 \text{ per cent}$$

Modifications of this formula were used when payments were uneven.

So far as the Commission was able to determine, this method is one of the commonest used by students of instalment selling, and apparently is used by sales finance companies to compute yields, and by the Federal Housing Administration to figure gross income return on instalment obligations.

How to Use Formula

Editor's Note. This formula seems to require a little more explanation. Let us take another case. Suppose

you buy an automobile, either paying cash or turning in your used car. In any case there is an unpaid balance of \$550. You agree to pay this off in 12 monthly instalments of \$55 each. You perhaps find that included in this amount is \$2.79 per month for insurance, leaving \$52.21 as repayment and interest.

Now multiply this \$52.21 by 12, the number of instalments, and you get \$626.52. Deduct from this the unpaid balance of \$550, and you get \$76.52 which is the total amount of interest that you are paying. To use the formula to find this as an annual interest rate:

$$\text{Rate} = \frac{2 \times 12 \text{ (number of instalments)} \times \$6.52}{\$550 \times 12 \text{ (number of instalments)} + 1} = 25.8\%$$

This is an actual case, in which the buyer was told he was paying only 6%.

Let us apply the formula to the General Motors Acceptance Corporation Plan of October 1935. According to this plan you take your unpaid balance, say \$500, and add to it 6%, which is \$30, amounting to \$530. If you divide this by 18, if we suppose that is the number of payments you wish to make, you arrive at your monthly payments. (Insurance charges would presumably be added, but we are not concerned with these.)

Now to find the rate, by means of the formula.

$$\text{Rate} = \frac{2 \times 18 \text{ (number of instalments)} \times \$30 \text{ (your total interest)}}{\$500 \times 18 \text{ (number of instalments)} + 1} = 11.37\%$$

By this formula you can readily check any purchase you make on the instalment plan, to see if the interest you are going to pay is reasonable. If you do not understand the use of the formula, we suggest you talk it over with your company accountant.

New Automobiles

The lowest rate found was 10 per cent, the highest was 36 per cent, and the average (median) was 25 per cent. If the extreme cases are excluded, the data uncovered in the survey indicate a range of cost rates on instalment purchases of new automobiles between 16 per cent and 31 per cent.

Finance charges in automobile financing appear generally to include fire and theft, and sometimes collision insurance in order to protect both the purchaser and the financier. In a great majority of other types of commodities no insurance is provided in the finance charge; the cost rates on automobile financing may not, therefore, be strictly comparable with rates on other commodities, although comparable among themselves. It is not possible easily to separate the cost of insurance from the rest of the finance charge, as many dealers apparently do not make this cost known to the customer, and only recently have the leading finance companies adopted a plan which shows this separate cost.

The new 6 per cent plan of financing, initiated by the General Motors Acceptance Corporation on October 21, 1935, and since adopted by Commercial Credit Company, Commercial

Investment Trust Corporation, and others, was put into effect during the course of this survey. Even among the concerns which use the 6 per cent plan, apparently there are substantial differences, due mainly to variations in the charge for insurance and to what seems to be the practice, among some finance companies, of raising fractional payments to the nearest whole dollar.

The Commission feels that, despite these variations, full credit should be accorded the finance companies for adopting the 6 per cent plan. It permits comparison of finance charges in a way not previously available, and should result in a very material reduction in the cost to the consumer. As an illustration, the cost rate of financing one low-priced 1936 four-door sedan was 37 per cent on the old plan, and was 21 per cent under the new 6 per cent plan, including insurance in both cases.

Used Cars

Cost rates on used car financing in the cases surveyed varied very widely, partly because insurance costs generally constitute a large part of the finance charge. Another apparent reason for variations in cost was the practice of using the finance charge to adjust the dealer's profit on the transaction. If the used car dealer felt it necessary to make concessions from the cash price, or to make an over-liberal allowance on the trade-in, he would sometimes add a compensating amount to the finance charge in order to protect his profit.

Customers, it seems, are more zealous in their comparison of the price of the article than in their comparison of the finance charge. The average (median) rate of charge is 47 per cent, for the cases covered in the survey.

Illustrative Cases

A vivid picture of instalment credit complexities is afforded by illustrative cases:

Case 1.—The dealer would sell a new \$750 automobile on either of two plans, identical as to size of down payment and length of time. The first, which included \$50 deductible collision insurance, and was financed by a national finance company, resulted in a cost rate of 30 per cent. The second plan, which was financed through a local bank and included no collision insurance, resulted in a cost rate of 16 per cent. Perhaps one half of the difference in financing cost was due to the difference in insurance coverage.

Case 2.—An automobile dealer charged \$110 to finance the eighteen months' instalment sale of a used car involving an unpaid balance of \$250 which resulted in a cost rate of 56 per cent. The salesman, with unique frankness, stressed the fact that the finance charge was quite large.

Case 3.—A furniture store charged 6 per cent on the unpaid balance for twenty-four months' terms, giving a rate of 12 per cent; but a competing store granted a cash discount of 35 per cent from the established price on the identical refrigerator, which, if

added to the regular 6 per cent charge, would give a comparative cost rate of 72 per cent.

Case 4.—The Blank Radio Company stressed the fact that they did their own financing, thus doing away with finance company charges. The cost, however, for buying on time (quoted by the seller as between 6 and 8 per cent) amounted to an annual rate of 87 per cent.

Case 5.—The price of a radio if bought on time was \$69 and no carrying charges would be added; but by offering to pay cash the customer was granted a 50 per cent reduction in price, resulting in a cost, for the thirteen weekly payment plan offered, of 881 per cent.

Case 6.—The X Y Z Piano Company sold their wares on the instalment plan for a carrying charge of one half of one per cent per month on the unpaid balance, as that balance declined from month to month with each payment. They said the rate was 6 per cent. It was 6 per cent.

Case 7.—The Blank Coal Company told the investigator that instalment selling of coal was unsound merchandising for the reason that the coal was consumed before it was paid for. However, the concern was willing to defer payment on a charge account basis for three months, and the charge for this service, \$2, resulted in an annual rate of 57 per cent.

Instalment Rates and Profits

Great caution should be exercised in drawing hasty conclusions as to

the instalment seller's profits from the size of the cost rate. On small balances and short terms a high cost rate may not even cover the seller's credit expenses; conversely, what appears to be a comparatively moderate rate may possibly yield the seller a substantial profit. What the cost rate does reveal is the comparative cost to the consumer of buying on the instalment plan and buying for cash, with consideration given to the length of the terms and the amount of credit obtained. A high cost rate does mean that the customer pays dearly for the amount of credit received; it does not necessarily mean that the seller makes exorbitant profits, or even any profits at all.

Conclusions

Analysis of the material in the survey would seem to point to the following conclusions:

1. Charges for instalment credit are levied in such complicated terms and with such lack of standardized practice that it is very difficult to compare costs of credit, and customers, therefore, are prevented from shopping intelligently for credit.

2. Confusion often results from (a) the great variety of plans in use; (b) the use of carelessly applied and non-standardized percentages; (c) special discounts for cash in addition to basic percentage or dollar credit charges; and (d) the fact that sellers sometimes refuse to give the essential facts as to credit charges and terms until the customer has decided definitely to make a purchase.

3. High rates of charge do not necessarily mean high profits, but high rates do mean high costs to purchasers relative to the amount of credit obtained.

4. Customers would be in a much better position to compare credit costs if some uniform yardstick of costs were universally adopted by credit grantors.

Instruments for Preventing Cut-throat Competition, which in Some Industries Squeezes out Profits and Degrades Labor Standards.

Collective Labor Agreements

By MARGARET MACKINTOSH

Department of Labour
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A COLLECTIVE labour agreement represents the arrangements for regulating conditions of work which have been agreed upon as a result of bargaining on the part of the representatives of employers and workpeople in the trade or industry concerned. It is an agreement between one or more employers or an association of employers and a group or association of workmen setting out the conditions according to which workmen are to be employed. These conditions may relate not only to rates of wages and hours of labour but also to the number and proportion of apprentices, the distribution of work, provisions for health and safety and a great variety of other subjects differing with the nature of the industry and the strength of the trade union. Some provision is usually made for

machinery to settle disputes between the parties and to ensure the observance of the agreement.

Cotton Industry Control

Under the English Cotton Manufacturing (Temporary Provisions) Act (1934), when the employers controlling the *majority* of looms in the industry and the trade unions representing the majority of the workpeople affected make joint application for an order giving legal effect throughout the industry to the rate of wages agreed upon by the representatives of the employers and trade unions, the Minister of Labour refers the application to a board of three independent persons for report. If the board unanimously recommends that the order be made, the Minister may issue an order applying the

agreed wage-rates to *all* in the industry. An employer paying less than the rate of wages provided for is liable to a fine of not more than £10. An agreement under the Act was arrived at on March 15, 1935, and was made legally binding on the employers and workpeople concerned as from July 15, 1935.

This statute was passed at the joint request of the employers and trade unions in the industry and is to remain in force until December 31, 1937. It was passed because the sharp contraction in demand for English cotton goods in recent years had led to severe competition between employers and to numerous violations of agreements as to wage-rates and the number of looms assigned to each weaver. On the second reading of the Bill in the House the Minister of Labour stated:

The question before the industry now is how to secure that the whole principle of collective bargaining does not break down. The great majority of the employers are anxious to honour agreements. The payment of lower wages where that has taken place, I am advised, has not resulted in the sale of a single extra yard of cloth anywhere. It merely means that employers who are faithful to the agreements, and wish to keep them, find themselves unable to compete with those employers who either have not been parties to the agreements or, if they have, have broken away from them. . . . Neither the Government nor any independent part is given any power to fix rates of wages, or to interfere in any way with the voluntary negotiation of wages and working conditions. I attach great importance to that, and so do the industry. This is a matter for them, and not for me or for this House, and in this Bill we are careful to secure that we do not in any way interfere with the great principle of voluntary negotiation with regard to wages and working conditions.

Canadian Collective Agreements

Last year in Quebec a Collective Labour Agreements Extension Act

was passed. This Act, empowers the Lieutenant-Governor in Council, on the recommendation of the Minister of Labour, to extend the operation of certain terms of a collective agreement between one or more associations of employees and one or more employers or associations of employers so as to bind *all* employers and employees in the same trade, industry or business within the district covered by the agreement. Petition for the extension of an agreement may be made to the Minister of Labour by any association of employees or employers which is party to the agreement. To safeguard the interest of non-parties, the Minister is required to give notice of the petition in the Quebec Official Gazette and for thirty days thereafter objections may be made to the extension of the agreement. If the Minister, then, is satisfied that its provisions "have acquired a preponderant significance and importance for the establishing of the conditions of labour" in the industry or business, he may recommend its extension, with any alterations he may deem expedient, to the Lieutenant-Governor in Council. An agreement with has been made binding may be amended in the same way. Account must be taken in the agreements of "the economic zones" of the province in establishing labour conditions. Nothing in the Act is to be deemed as compelling any person to become or not to become a member of any association.

When a collective agreement is applied by order in council to all em-

ployers and employed in the industry, it governs all the individual labour contracts within its scope except those providing more favourable conditions for the worker, unless this variation from the terms of the collective agreement has been expressly prohibited by the agreement itself.

In the original Act, it was stipulated that only the wages and hours terms of the agreement might be given general application. Under the 1935 amendment, the provisions as to apprenticeship and the proportion of apprentices to qualified workmen may also be made generally binding.

Joint Committee Enforces

The enforcement of an agreement is entrusted to a joint committee which must be set up by the parties and to which not more than two persons representing other employers and workers in the industry may be added by the Minister of Labour. The committee may check up wage-rates, working hours and apprenticeship conditions to see that they are in accordance with the agreement and it is given authority to represent the workers, without having to prove an assignment of claim, in any action arising in their favour from an agreement. A joint committee is constituted a corporation for the purposes of the Act. Neither the committee nor its members may be held liable for damages to an employer through a suit brought in good faith but unfounded in fact. A committee may, in accordance with the agreement,

levy on the employers, or on both employers and employees, the amount required to meet its expenses in enforcing the agreement, provided that the rate of assessment and the estimates of receipts and expenses are approved by the Lieutenant-Governor in Council and quarterly reports made to the Department of Labour, which is to act as trustee of any balance at the expiration of an agreement. The levy, however, must not exceed one-half of one per cent of the workman's wages or of the employer's payroll.

Any person who violates a wages schedule may be required to pay to the joint committee, as liquidated damages, twenty per cent of the wage claim as determined by a court. For violation of any other provision of an agreement made obligatory, or for making false returns to a joint committee or its inspector, or for refusing information or obstructing the latter in his duties, fines may be imposed.

Court Upholds Acts

A large number of actions by individuals have come before the Quebec Courts under this Act. Almost all were claims for wages at the rate fixed in an agreement. In January, 1935, numerous claims were determined by a judgment of Mr. Justice Stackhouse of the Circuit Court of Montreal involving the building trades agreement. The plaintiff, a painter employed by a master painter and contractor, claimed wages at the rate fixed in the collective agreement which had been extended by order in

council to apply to all employers and employees in the building industry in Montreal. *Neither the plaintiff nor the defendant was a party to the agreement.* Judgment was given for the plaintiff.

In September, in *Sekel v. Kelly*, the plaintiff's claim for wages at the rate fixed in the Montreal building trades agreement was allowed, the Court holding that the construction of an underground conduit for electric wires on which he was employed was covered by the agreement. In another case, the joint committee established to enforce the agreement in the shoe industry was successful in an application to have certain workers paid according to the hourly rate fixed in the agreement for that industry, although they had made their contracts on a piece-work basis. Mr. Justice Boyer in the Bankruptcy Division of the Superior Court of Montreal pointed out that the law provides that—

a worker, whatever agreement he himself may make, is entitled to claim the difference between what is paid him and the minimum wage fixed under the authority of the law. . . . The fact that the workers are on piece-work does not prevent the application of the law seeing it is based on the number of working hours and requires the employer to keep a true record of the hours and that otherwise the law would be ineffectual.

Several prosecutions under the amended Act have been successful. Most of these have been for obstructing the members of the joint committees or their inspectors in their duties of inspecting employers' records as to wages and hours. One complaint was dismissed on the ground that it had been sworn out by an inspector

and not by a member of the joint committee as the court deemed necessary.

Sixty Agreements

About sixty collective agreements were given general application by order in council between April 20, 1934, when the Act went into effect, and March 1, 1936. Of these, some fifty, covering approximately 135,000 workers, were in effect at the end of 1935. The classes of workers affected included those employed in construction in about ten different areas, barbers and hairdressers in eleven districts, bakers and bread distributors in six areas, longshoremen for inland and ocean vessels at Montreal, fur and millinery workers in Montreal, printers in Quebec City and in Chicoutimi and persons employed in ornamental iron and bronze workshops in Quebec and Montreal. In addition, legal effect has been given throughout the province to the agreements covering granite and stone cutting and the manufacture of boots and shoes, women's cloaks and suits, men's clothing and furniture and gloves. Lower rates of wages and, in some cases, longer hours are permitted in the smaller towns than in the larger centres. It has been estimated by the Quebec Department of Labour that these agreements have effected an average annual increase of \$60 for the workers concerned. Most of the agreements are stipulated to remain in force for one year or for the season and to be renewed automatically unless one of the contracting parties gives notice of an intention to modify

or revoke an agreement. Many of these have been amended in one or more respects. All the agreements lacking the automatic renewal clause have been renewed except three, those relating to longshoremen employed in Montreal in connection with seagoing vessels, to electricians in Three Rivers and to fur workers in Montreal.

All the agreements legalized appear to have been made by trade unions on the workers' side, except those relating to granite and stone cutting. In these two cases, the agreements were concluded by a number of employers and a committee of employees.

Interprovincial Competition

The Act stipulates—"The Lieutenant-Governor in Council may refuse to apply the provisions of this Act to any industry liable, in his opinion, to suffer, through their enforcement, serious injury from the competition of foreign countries or of other provinces.

In the matter of interprovincial competition, the representatives of the joint committees appointed to enforce the agreements in Quebec have declared themselves opposed to separate provincial agreements in competitive industries. A possible solution of the problem of such competition in labour conditions is indicated by the action of employers and trade unions in the millinery and women's clothing industries after the enactment of the Industrial Standards Act in Ontario. This statute also provides that the wages and hours

terms of an agreement may, on certain conditions, be made binding on the whole industry within the district specified. The millinery workers' international union negotiated agreements with the millinery manufacturers' association of Montreal and with manufacturers in Ontario at the same time. Both agreements provided for a 40-hour week and a five-day week with provision for limited overtime in rush seasons. Weekly wages fixed in the Montreal agreement were one dollar less for six classes of workers than in the Ontario agreement, with the same rate for the one remaining category. The Ontario agreement was made obligatory on the millinery industry throughout the province but it was stipulated in the order in council that the provisions as to hours should not become effective until similar provisions were put in force in the Montreal district. The Montreal agreement was gazetted a few days later. Similarly, the agreement of the International Ladies Garment Workers' Union covering the making of women's cloaks and suits was made binding on all employers and employed in this industry in Ontario and Quebec. In this case, the same minimum wage-rates and maximum hours of labour were established in both provinces.

The Industrial Standards Act of Ontario differs in several important respects from the Quebec law on collective agreements but the underlying principle is similar—the application of a common rule as to wages and hours of labour to each of the various

classes of labour in an industry, if agreement is reached by a sufficient proportion of the employers and workpeople concerned. In Ontario, however, the Act expressly authorizes the Minister of Labour to promote the conclusion of collective agreements by calling conferences of the employers and employees for the purpose of negotiating agreements if representatives of either group request him to do so. In Quebec, the Minister of Labour acts only after an agreement has been reached and petition for its extension has been submitted to him.

Attitude of Employers

It is difficult to estimate correctly the attitude of the general body of employers to the Industrial Standards Act and the Collective Labour Agreements Extension Act. In two recent articles in a trade journal, officers of the Montreal Builders' Exchange and the Toronto Building and Construction Association respectively, representing practically all the large contracting firms in these cities, express definite approval of the principles of this legislation. Other firms engaged in speculative house-building in Toronto have been reported as opposed to the Ontario statute. A large part of building operations in Canadian cities has been carried on for many years under collective agreements and the big construction companies are accustomed to collective bargaining.

In the manufacturing industries,

this is not the case and the Canadian Manufacturers' Association has declared its opposition to collective bargaining between employers and trade unions, although some of its members enter into collective agreements with trade unions. The industrial relations committee of the Association reported on its action regarding the Industrial Standards Act as follows:

With regard to the Ontario Industrial Standards Act which is modelled on the Quebec Collective Agreements Extension Act, it was held by your Committee to be objectionable on the ground that it would inevitably constitute an invitation to trades unions to proceed to unionize all industrial workers. Your Committee considers that the Association should still adhere to its traditional policy of insisting that wages, hours and conditions of employment generally should be agreed upon between employers and their own employees; and it was primarily because this new collective bargaining legislation appears definitely to deny that principle that your Committee considered that it should be vigorously opposed. The Bill passed the Ontario Legislature in spite of the representations made.

In February, 1935, the Quebec Division of the Association presented a memorandum to the provincial Government from which the following is extracted:

At the last session of Parliament, an Act respecting the Extension of Collective Labour Agreements was passed, after several amendments in the original text of the Bill. The Act, by its very nature, does not in our opinion admit of any great degree of variation by amendment without the danger arising of its developing from a reasonably helpful statute to one fraught with grave danger to the industrial life of the Province . . . we would urge that the Government be persuaded to allow the Act to remain in its present form without change for some time to come, until it is thoroughly tried and tested.

Extracted from the Canadian Bar Review, Vol. 14, Parts 2 and 3, 1936.

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Annual Conference
PERSONNEL RESEARCH FEDERATION

New York, December 2, 3, and 4, 1936

HOTEL PENNSYLVANIA AND THE ENGINEERING SOCIETIES BUILDING



Wednesday, December 2

Morning Sessions

A) "Psychiatry in Industry"

Chairman: Dr. Clarence M. Hincks, General Director, National Committee for Mental Hygiene.

Dr. Elton Mayo, Harvard Graduate School of Business Administration, and Dr. Lydia Giberson, Metropolitan Life Insurance Co. (other speakers to be announced), will discuss the maladjustments of employees, how these have originated through lack of guidance, poor home conditions, and unsatisfactory work conditions. The preventive and remedial steps necessary will be explained.

B) "Executive Compensation and Appraisal"

Mr. Harry Hopf of H. A. Hopf Co., will discuss the subject of executive compensation and a representative from the government will talk on the appraisal of executive's work.

Afternoon Sessions

A) "Determining Wage Rates"

Chairman: James W. Towsen, West Virginia Pulp and Paper Co.

Many business concerns with branch offices, factories, and retail outlets located in various parts of the country are setting up formulae and plans for basic wage structures which will be equitable. These are often based on U. S. Bureau of Labor Statistics data on wages, cost of living, and the labor market. At this meeting the use of such data will be discussed in a panel discussion by:

Dr. A. Ford Hinrichs, U. S. Bureau of Labor Statistics.

C. Frederick Hansen, W. T. Grant Co.

Ralph L. Mason, Standard Oil Co. of New Jersey.

B) "Job Tests"

(sponsored by Psychological Corporation)

Chairman: Gen. Robert I. Rees, American Telephone and Telegraph Co.

Dr. W. V. Bingham will give a paper based on material he has used in preparation for his

book, "Aptitudes and Aptitude Testing," which is to appear within the next few months. The use of tests in factories, offices, retail trade, and the government will be discussed by representatives from each field.

Dinner Session

An informal dinner is being arranged at which the application of psychiatry in industry will be discussed.

Thursday, December 3

Morning Session

"Modern Principles and Practice of Manufacturing Organization in Employee-Employer Relationship."

Joint session with the A. S. M. E. and the S. A. M. at the Engineering Societies Building.

Chairman: C. G. Stoll, President Personnel Research Federation.

A picture of an organization showing the way in which units are tied together for industrial harmony and where the lines of responsibility lay within each unit. The duties and problems of each person will be discussed by the men actually involved and representing the Westinghouse Electric and Mfg. Company. The representatives are:

W. G. Marshall, Vice-President, Westinghouse Electric & Mfg. Co.

T. I. Phillips, General Works Manager, Westinghouse Electric & Mfg. Co.

J. H. Priest, Supervisor Works Industrial Relations, Westinghouse Electric & Mfg. Co.

R. M. Rumbel, Manager Meter Division, Westinghouse Electric & Mfg. Co.

Luncheon Session

"Training for Management"

Joint session with the S. A. M.

Chairman: Hugo S. Diemer, LaSalle University.

Dr. Harry D. Kitson of Teachers College, Columbia University, will talk on the training which the personnel director of today should have.

Other speaker to be announced.

Afternoon Session

"Training Skilled Workers"

Joint session with the A. S. M. E. and the S. A. M. at the Engineering Societies Building.

Chairman: Dean C. J. Freund, College of Engineering, University of Detroit.

Mr. Frederick B. Searle, Superintendent Henry Ford Trade School, will discuss methods of training apprentices.

Mr. C. G. Simpson, who is in charge of training at the Philadelphia Gas Works, will discuss the training of adult workers for skilled or semi-skilled work and the further training of workers for higher skills.

Friday, December 4

Morning Session

"What Employees Want"

Chairman: Charles S. Slocombe, Personnel Research Federation.

Policies in labor relations and practices in personnel management will undoubtedly be improved through a knowledge of employee motivations. The following persons will take part in a panel discussion of how employees' emotions can find an outlet, how their motivations can be learned by management and what the practical results are:

Professor T. North Whitehead, Harvard Graduate School of Business Administration.

T. E. Torrance, The Bell Telephone Company of Canada.

H. A. Wright, Western Electric Co.

Luncheon Session

"Profit Sharing"

Joint session with the S. A. M.

Chairman: Edgar S. Smith, General Motors Export Co.

Discussion of profit sharing plans by representative of company which has had a plan in effect for a considerable time with successful operation.

Afternoon Session

"Lower Wages or Higher Prices: Distribution of National Income"

Chairman: Howard Coonley, Walworth Co.

The issues of price levels, wage levels, profits, and taxation, in relation to the best distribution of income for maximum production and consumption will be discussed by Rufus Tucker formerly of Brookings Institute. (Other speaker to be announced.)

Dinner Session

"Social Responsibility of Business and Industry"

Joint session with the S. A. M.

Chairman: Ordway Tead, President Society for Advancement of Management.

Professor Paul H. Douglas of the University of Chicago will speak on the responsibilities which private business and industry have in our present economic system.

Other speaker to be announced.

General Information: All sessions will be held at the Hotel Pennsylvania and the Engineering Societies Building, New York.

There will be no registration fee for members of the Personnel Research Federation. Registration fees for non members are: \$2.00 for sessions on 2 or more days; and \$1.00 for session on 1 day only. Registration fees do not cover admission to Luncheon and Dinner meetings.

Cooperating organizations:

PERSONNEL RESEARCH FEDERATION
AMERICAN SOCIETY OF MECHANICAL ENGINEERS
SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT
PSYCHOLOGICAL CORPORATION

Other sessions on the A. S. M. E. and the S. A. M. programs which are of interest to our members are:

Monday, November 30, 8:00 p.m. Engineering Societies Bldg. A. S. M. E.

Subject: "Time and Motion Study"

Speakers: "An Investigation in Some Hand Motions," by Ralph M. Barnes, State University of Iowa.

"Introduction of a Time and Motion Study Program," by W. R. Coley, Leeds and Northrup.

"Motion Study as a Basis of Establishing Proper Employee Training and Personnel Relations," by A. Williams, Jr., Hood Rubber Co.

"Social Aspects of Motion Study," by Allan H. Mogensen, Consulting Engineer.

Wednesday, 2:00 p.m., December 2, Engineering Societies Bldg. A. S. M. E. and S. A. M.

Subject: "Plant Layout"

Chairman: John R. Shea, Western Electric Co.

Speakers: "Economics of Manufacturing Layout in a Varied Product Plant," by A. F. Murray, Westinghouse Electric & Mfg. Co.

"Time Studies and their Relation with Factory Layout," B. C. Koch, International Business Machine Co.

Friday morning, December 4, Hotel Pennsylvania. S. A. M.

Subject: "Present Day Production Problems"

Speakers: "Progressive Social Legislation as it Affects Internal Operating Problems," A. J. Verkozen of Holland

"Late Developments in Production Management," Thomas M. Landy, General Electric Co.

A Description of the Very Complete Medical Service which the Metropolitan Life Insurance Company has Organized for its 12,000 Employees at the Home Office.

Medical Service *for* Employees

Extracted from a Report of
The Medical Staff
Metropolitan Life Insurance Company

THE "Medical Rest Rooms" is the designation of the Division at the Home Office of the Metropolitan Life Insurance Company at 1 Madison Avenue, New York, in which the medical work here reported is done.

The Rest Rooms consist of a medical and a surgical dispensary, separate quiet rooms for male and for female employees temporarily ill or too ill to return to work and waiting further disposition, rooms equipped for eye tests, for infrared and ultraviolet radiation, and instruction in proper exercise for the correction of postural defects. These services are available to Home Office employees only. In addition, an examining section has accommodations for applicants for

employment at the Home Office, and the annual examination of Home Office employees. Laboratories are equipped for basal metabolism, blood analysis, electrocardiograms, and X-rays. There are fluoroscopes in six rooms adjacent to examining rooms, and these instruments are used freely by all members of the medical staff. Milk is served twice a day to employees who need extra nourishment.

The Medical Rest Rooms are under the supervision of a full-time physician. The medical staff is composed of 23 men and women physicians, who work part time. There are two full-time physicians, one engaged in neuropsychiatry and the other devoting full time to the tuberculosis problem in the Home Office. Specialists

are available in cardiology, diseases of the chest, ear, nose and throat, eye, gastro-enterology, gynecology, internal medicine, neuro-psychiatry, orthopedics, and surgery. The service given to the employees consists of first-aid or emergency treatment, advice, and diagnosis, particularly in cooperation with, or at the request of, the family doctor. There is no attempt to act in the capacity of the private physician.

A competent nursing staff is an integral part of the organization. In addition to the nurses in the Rest Rooms at the Home Office, there are nurses who visit Home Office employees who are absent from duty because of illness.

The complete medical record of each Home Office employee is filed in the Medical Record Room. This file includes the preemployment examination, the annual examinations, notes made at each dispensary visit, reports of all laboratory, electrocardiographic, or X-ray examinations, a record of all absences for illness and the reports of the Visiting Nurses. The Record Room is in the charge of a trained statistician who makes monthly and yearly reports, and reports of special studies.

Routine

The routine in the Medical Rest Rooms is, briefly, as follows:

Visits—Employees may come to the Rest Rooms at any time during the day. They first report to the Record Room and then proceed to the Dispensary. The medical chart is taken from the file and is sent to the doctor.

If an employee is too ill to work, or wishes to go to an outside clinic or to his own doctor, he must first obtain medical recommendation to be excused during business hours.

When some abnormality which requires watching has been found at an examination, patients are called to the Rest Rooms at the time designated by the doctor for a check-up or "observation."

Patients are required to report to the Rest Rooms after an absence for illness.

Absences—When an employee is absent because of illness, his supervisor notifies the Medical Division in writing on the first day of Absence. Cases are visited by one of our Visiting Nurses on the first, second, or third day of illness, and her report is recorded on the patient's medical chart. Before the patient returns to work he reports first to the Rest Rooms, where he is given a written recommendation to continue at home or to return to work.

Physical Examination—Every employee is required to undergo an annual physical examination and, at the appropriate time, is notified that the examination is due. Since 1928 a fluoroscopic examination of the thorax has been a part of each complete physical examination. Since 1930 an electrocardiogram has been done on all clerical employees over age 40.

Examinations of applicants for employment, for insurance, for Accident and Health issue or claim are made by the same staff which makes many of the annual examinations of employees.

Chest Service

In the year 1935, examinations were made on 764 applicants for employment.

Incidence of pulmonary tuberculosis: active, questionably active, apparently healed among applicants for employment examined at the Home Office 1928 to 1935

CASES OF TUBERCULOSIS							
YEAR	NUMBER OF APPLICANTS EXAMINED	Number	Incidence per 1,000	Discovered by			
				History	Physical	Fluorocopy only	
						Number	Per cent
1928	4,405	69	15.7	9	-	53	77
1929	4,780	57	11.9	6	6	45	79
1930	3,105	36	11.6	3	1	32	89
1931	2,175	33	15.2	2	4	27	82
1932	2,134	32	15.0	2	0	30	94
1933	1,166	17	14.6	3	1	13	76
1934	969	14	14.4	6	0	8	57
1935	764	9	11.8	0	0	8	89

During the year under review 55 new cases of tuberculosis were diagnosed among the employees, of which 36 were detected at the routine annual examination, 15 at the time of a visit to the Dispensary, and four in other ways (*i.e.*, X-ray retake, contact case, etc.).

Incidence of new cases of pulmonary tuberculosis: active, questionably active, apparently healed among Home Office employees 1928 to 1935

YEAR	HOME OFFICE EMPLOYEES	NEW CASES OF TUBERCULOSIS	RATE PER 1,000
1928	11,530	106	92
1929	11,966	85	71
1930	12,468	71	57
1931	13,081	72	55
1932	13,582	59	43
1933	13,960	42	30
1934	14,045	56	40
1935	13,962	55	39

More important than the total number of cases of tuberculosis is the

number which are active, since these require treatment. Twenty-seven cases discovered in 1935 were considered to be active.

A study of the stage of the disease at the time of diagnosis reveals that a large proportion of the active cases are in the minimal stage. This percentage is favorable, particularly when compared with the admission rates reported from tuberculosis sanatoria throughout the United States.

Tuberculosis Among Employees

On January 1, 1935, there were 535 known cases of tuberculosis (active, questionably active, and apparently healed) among the employees. Some were curing, and most of the healed cases were at work under medical observation. During the year some of the tuberculous employees left the service of the Company and 55 new cases were diagnosed. At the end of 1935 there were 539 known cases of tuberculosis among the Home Office employees.

This service also examined cases of chronic bronchitis, bronchiectasis, unresolved pneumonia, pleurisy with or without effusion, pneumonitis, nontuberculous spontaneous pneumothorax, lung abscess, asthma, monilia infection, and Friedlaender's bacillus infection during 1935.

Heart Disease

During the past year, as heretofore, Home Office employees afflicted with cardiovascular disorders have been the subject of rigid scrutiny. When suffering from definite symptoms, the

fundamental basis for the subjective phenomena has been explained with a view to avoiding unnecessary alarm and worry and, at the same time, to insuring a proper appreciation by the individual. Adequate treatment by the patient's physician, with whom satisfactory contact has been established and at whose disposal pertinent material has been placed, has been advised when necessary.

At their routine annual examination, the Home Office clerical employees over age 40 are questioned specifically for cardiac symptoms. Often an X-ray of the heart and routinely an electrocardiogram, to which has been added the fourth or anteroposterior electrocardiographic chest lead, is made.

Stomach Ailments

Employees with symptoms suggesting gastrointestinal lesions are referred to this service for diagnosis by their own physicians or by doctors in the Medical Rest Rooms. Some of the patients also come on their own initiative. In each case, a careful history is taken and a physical examination is made before appointments for fluoroscopic or X-ray examinations are given. This is necessary, not only as an aid to diagnosis but to make certain that there is no contra-indication for the above procedures. In a few instances the history or physical examination has revealed an acute appendicitis or appendiceal abscess. These instances are rare, but cannot be overlooked.

If abnormalities are found, the em-

ployee is advised to consult his physician for advice and treatment and a report of the fluoroscopic examination and any X-ray films are sent to him. The possibility of any lesion of the colon or rectum is always considered. Patients are referred frequently to their own doctor or to a clinic for sigmoidoscopic examination and barium enema.

Follow-up examinations are made from time to time either at the request of the attending physician, or when the patients report to the Rest Rooms with symptoms which suggest recurrence or complications.

Effort is made to cooperate with the individual and his doctor in helping the patient follow his ulcer regime. In most instances arrangements are made for between-meal feedings, an important factor. Some of the cases are invited to the Company Sanatorium at Mount McGregor for observation and diagnosis, and some, who have been operated on, are invited there to convalesce.

Gynecological Service

In recent years industrial organizations employing large numbers of women have come to realize that there are many gynecological conditions which cause discomfort and loss of working time. Some years ago the need for specialized care became apparent, and arrangements were made whereby women employees could consult women physicians regarding pelvic problems.

At first the employees showed some hesitancy in taking advantage of this

service, but gradually their confidence was gained and now they consult the doctors in the Rest Rooms freely. We believe that this is a definite step forward in health education. Great stress is being made today to teach women to consult physicians regarding pelvic conditions which formerly were neglected due to ignorance or fear. Undoubtedly, many operations on younger women may be avoided by early diagnosis of pelvic pathology and reference to gynecologists for proper treatment. Fewer malignancies will develop if older women can be persuaded to have suspicious growths or unusual bleeding promptly diagnosed and treated. There is need for further education of women employees along these lines, and much more can be accomplished.

Dysmenorrhea, one of the chief gynecological problems, has been studied in the Medical Rest Rooms for the past eight years. From 60 percent to 75 percent of all dysmenorrhea cases in young women are due to constipation, pelvic congestion, etc. A hygienic regime of exercises and attention to the intestinal tract will cure most of such cases; the other 25 percent to 40 percent are due to actual pathological conditions requiring gynecological treatment, surgery, or endocrine medication. A study was begun for two reasons: (1) to relieve discomfort, and (2) to reduce, if possible, unnecessary absence and visits to the Dispensary. The number of days lost in absence for dysmenorrhea in 1928 averaged 20.3 days per 100 women, and in 1935 this average was

4.3 days per 100 women. The number of visits to the Rest Rooms fell from an average of 45.2 per 100 females in 1927 to 21.0 in 1935.

The pamphlet, *Hygiene for Working Women*, published by the Company, has greatly aided in the dysmenorrhea work in the Medical Rest Rooms. These pamphlets have also been distributed to other organizations and, apparently, have helped many women.

Neuropsychiatric Service

It is a recognized fact that in all large organizations about 20 percent of the employees are problem cases. It is mainly from this group that the patients for the neuropsychiatric service are drawn.

In our Company, these cases are referred chiefly by our medical staff, but many referrals come from Division Managers, Supervisors, or directly from the Personnel Division. Perhaps the most hopeful and satisfying sign of progress in this service is the comparatively large number of people who come of their own accord, asking help with their problems. This service endeavors to have each employee feel that here is a spot where any emotional problem may be unburdened and talked through to a better understanding. Therefore, the progress of mental hygiene in the Company can be measured approximately by the increase in the number of voluntary patients and of referrals by those in a supervisory capacity.

Quite often the psychiatrist is consulted regarding hospitalization or

suitable treatment for relatives or employees whose illness is believed to be nervous or mental in type. Occasionally the psychiatrist is asked to examine applicants for positions.

The individuals seen in the Neuro-psychiatric Service may be divided into four groups, with subdivisions legion:

1. Those suffering with organic neurological conditions, such as epidemic encephalitis, brain tumor, epilepsy, syphilis of the central nervous system, cerebral accidents, etc.
2. Frank psychoses, seen chiefly as depressions, manic states, and schizophrenic reactions as shown by delusions, hallucinations, etc.
3. Psychoneuroses, commonly called "nervous breakdown."
4. Maladjustments.

Obviously most of the cases in the first two groups are too ill to be at work, but it is the function of the psychiatrist to cooperate in every way with the outside physician and the family in order that the patient may secure the best possible care.

Emotional Immaturity

It is in the third and fourth groups that many Company problems arise. The psychoneurotics comprise the largest single group of employees seen in a psychiatric service of any large organization. In all cases there is a definite fixation of their attention on themselves and an emotional reaction far out of proportion to their difficulties—too often their symptoms are a

direct play for sympathy and attention, or an excellent alibi for failure in a given situation. In other words, these individuals are emotionally immature; they react as children to reality, choosing escape mechanisms and translating disappointments and difficulties in many cases into such symptoms as dizziness, headache, pain in the back, constipation, insomnia. Every psychoneurotic individual should have a thorough physical examination to rule out possible organic disease with a superimposed crippled personality, but in most cases it is unwise to give treatment on the physical basis as this tends to further fixate their disorder. Many a psychoneurotic has been done irreparable harm because someone has unintentionally emphasized the necessity of a strict diet or of avoiding a certain type of work or exercise. Many psychoneurotic cases can be handled by a frank discussion of their underlying difficulties together with a program worked out for them which calls for sensible eating habits, the proper amount of sleep, and, above all, adequate recreation. The large percentage of psychoneurotics who have deep-seated fears, obsessions, and hysterical manifestations need prolonged treatment and careful handling by a psychiatrist. Many of them will never make good business material, but a sufficiently large number can be salvaged to make the effort profitable, not only in terms of community social service, but in terms of dollars and cents.

Maladjustments to Work

In the fourth group of cases we have the maladjusted individuals. Many of these suffer from personality difficulties or maladjustment to people. These cases are fairly successfully handled by a careful psychiatric study of personality make-up and important causative factors underlying the problem. The system of treatment must be sufficiently long to change in some measure the behavior and attitude of the individual. Another group of individuals show maladjustments to home. By this we mean financial struggles, extreme tension, unhappy relations with other members of the family, too rigid discipline, or religious differences, with resulting fatigue and indirectly a poor production at work due to improper mental attitude. This group of maladjusted persons attribute all their illness to overwork. Much can be done to change this attitude and improve conditions. Probably the most important of this group are those who are maladjusted to their work. This divides itself into new employees and old employees. The young employees are often struggling with their first job. They find themselves in an entirely new environment; they are not used to punctuality, to the necessity of getting work done at a given time; never before have they been disciplined; they do not understand teamwork. Most of these difficulties can be smoothed out by talking the matter through with the psychiatrist

and getting the patient's viewpoint changed. In all these cases the situation is discussed by the psychiatrist with the employee's supervisor, and it is to the credit of the latter group to note the amount of cooperation which they are willing to give in order that every new employee has the opportunity of finding a proper place. Of course, one finds some employees who do not adjust readily despite help given them, but early tend to show personality traits not conducive to efficient work.

During 1935 a total 205 new patients were examined, 79 of whom were men and 126 women.

During the same year there were 3,789 interviews independent of the 205 new cases. These interviews cover reexamination of patients, discussions with other physicians regarding the cases, psychotherapy conferences, and interviews with supervisors regarding their cases. This year, as last year, one of the most gratifying achievements has been the response of the supervisors who came voluntarily to the psychiatrist to discuss the problems of their people and to ask help in trying to solve their difficulties.

We have outlined the psychiatric work done in this Company along the lines of diagnosis and treatment, but we look to the future for a preventive program, and the foundation of a psychiatric platform in personnel work. This does not mean an administrative position in the management of personnel activities, but a

consulting aid in working out a definite personality study of applicants for employment and the correlating of psychological tests of ability and emotional stability to meet the demands of pressure of work and the necessity of being able to cooperate with other people through periods of intense stress and strain.

Another important thought for the utilization of psychiatry in the business world is in the selection of promotional material. Unfortunately too many people sell their pleasing personalities rather than their ability in a position where ability is most important. It is equally disastrous to place the individual of great ability but with personality difficulties in charge of many people. Unhappiness, which tends to lessen efficiency, and in some cases actual nervous breakdown due to mental bullying, are apt to follow. Truly no one should supervise others who is unable to supervise himself.

Visiting Nursing Service

Supervision of Absences

In 1935 the number of visits made to the homes of employees reported absent because of illness totaled 16,427. Of that total 13,829 visits were made by nurses of the Home Office staff and 2,598 by nurses

of affiliated agencies. Five nurses on the Home Office staff spend the entire day doing this work; another assists in the office for a short period each morning, then goes into the field for the remainder of the day.

A review of the absence records of our employees over a period of years indicates a lessening of time lost in absences of short duration.

The tendency to remain away from work for trivial reasons is disappearing gradually, and with few exceptions the absences have been justified. When the absence is found to be unjustified it is not excused, and in all such cases showing a previous poor attendance record the attention of the Personnel Division is solicited.

In addition to giving nursing care, the Visiting Nurses, in their daily rounds, meet with many problems. Oftentimes they give instructions as to proper living habits or diet, and impress the importance of keeping fit in order to do the job well. Or there may be some home situation where the nurse's aid is helpful, such as need of material aid, assistance in calling a physician, hospital, or clinic; frequently some member of the family desires advice in regard to homes for the aged, convalescent care, and other kindred matter. In all such cases the nurse assists the employee to find the resource that the need requires.

Three New Methods which have
been Developed for Increasing
Employer-Employee Coöperation.

Workers *as* Individuals

By CHARLES S. SLOCOMBE
Personnel Research Federation

RECENTLY we have come to think of labor relations in terms of collective bargaining between groups of workers and management officials. But labor relations are also individual. The individual personal reactions of employees, which go on side by side with the collective bargaining machinery, in summation carry over into and often color or determine group bargaining.

I will discuss three methods which have been developed to find the underlying factors in individual reactions among workers.

One company selected a worker from the bench, a highly intelligent well balanced and shrewdly sympathetic individual. His job is to go around among 350 men and listen to their tales of pleasure and woe. He walks on to the floor of the shop, picks out a worker or one comes up

to him, and they go off to some other part of the shop where they can be by themselves and talk.

This talking or listening worker, perhaps we might call him interviewer, though nobody has tagged him in the plant yet except by his name, Jim Thomson, reports to a company employee who was sent to a college to learn industrial psychology. Otherwise no reports of what he hears are made to the personnel or operating departments. His job is to let workers talk to him. Let us consider some of his cases.

Mr. Bunk

He approached a worker, let us call him Mr. Bunk, took him over in the corner and gave his little introduction which usually starts an employee talking. No response. So he tried other means to get a reaction. Fin-

ally he got an emphatic one, "Its the Bunk, its the Bunk. I don't want to talk to you. What can you do for me? I have seen every man in this Company from the foreman to the Vice President, I can't get anything from them, and you can't give me anything, so I won't talk to you."

Then, of course, he proceeded to talk at length. To give you the gist of the story, Mr. Bunk had been ambitious in his early days, had married a girl above his station in life. He worked hard and became a supervisor, moved to a better part of town, built a bungalow and furnished it with a grand piano. He also bought a two family tenement house. He was going up the ladder of promotion, and to riches as a property owner.

Unfortunately for him he didn't match up as a supervisor and was put back on the bench, just before the depression. He couldn't stand that and quit the Company. He tried to make a living as a real estate agent and insurance salesman but failed. So after 12 months he demanded his old job back. He put on so much pressure, that even though men were being laid off, he was taken on, and not only that but the Company lent him \$2000 on his tenement house because of a threatened foreclosure.

Well, he got into further difficulties because of the short working week, and low pay and finally the Company told him he had better rent or sell his bungalow and come and live in the half of, the tenement house he couldn't rent. But no, his wife

couldn't possibly live in such a district, so finally the company was forced to foreclose on the tenement house. Now Mr. Bunk's grievance is that the Company stole his valuable property for \$2000. That is all he can see.

That was his story and he took three hours elaborating the details. When Jim managed to back away, Mr. Bunk said happily, "Come and see me again. I enjoyed our talk."

I have taken time with this case because it goes to the heart of the whole program. There is nothing anyone can do for Mr. Bunk, but if he is given a periodic chance to talk he gets relief and the Company does not seem such a robber.

Workers have grouches, grievances, prejudices, twisted points of view, (we all have them), but if they are given an opportunity to get them off their chests, to spread them out on the table and look at them, they do not seem so bad after all.

Vacation Spoilt

Let us take another case. Jim heard a violent argument going on between a worker and his foreman, so investigated.

This worker, call him Tom, took a great interest in the affairs of the Community in which he lived, helped to organize boys clubs, helped in church affairs, belonged to a lodge, etc. In this work he had met a wealthy man who was also interested in community affairs and who took a liking to him.

Last spring this man invited Tom

and his wife on a trip to Yellowstone Park during their vacation in a large Lincoln he owned. Tom looked forward to the trip so much, he could talk about nothing else for months.

Then in June the foreman announced, "Well boys it looks like no vacation this year. There is so much work on order that it looks as if we will have to stay and work." Tom reluctantly told his friend that he couldn't go to Yellowstone Park because he had to stay and work.

One Friday later the foreman said, "Well, boys, we shut down for vacations Monday." You can imagine how Tom talked to the foreman.

But it didn't bother the foreman. He said, "Why the fool, he has been working for this Company long enough to know that no man has to work during vacations if he doesn't want to."

Tom said, "My job is to work for the Company and if they want me to work during vacation it is up to me to do so, but that dumb foreman, he . . . " and so on.

Jim Thomson, in this case, by talking with the man and with the foreman did more than listen. He tried to leave things so that the man would not develop a grouch against the Company as one which changed its orders at will without consideration for its workers. He also tried to get the foreman to see that his words meant a great deal in the lives of those under him.

Trying to get 6¢

The cases that Jim met had all sorts of angles in which work conditions

and family life were intermixed. The last man in this Company of which I will speak found himself, after the shuffling and reshuffling of depression and recovery, back with his old group of workers but at a wage rate 6¢ an hour less than they.

Several supervisors could have recommended a raise for him to bring him back in line, but the one who should really have done so was a relative of his wife, and would not do so for fear he would be accused of favoritism. The others got so sick of his complaining about it that they wouldn't recommend him either. So there he was in the trap.

The primary purpose of this program is to give workers a chance of easing the burdens of their souls. But actually I feel that something more positive must and should come of it. Policies in labor relations and practices in personnel management will undoubtedly be improved through the knowledge of employee emotions which Jim Thomson is finding out.

But the primary nature of Jim's work is cathartic. It is too soon to evaluate this type of work, to see where it can lead. It is very evident that it would be exceedingly dangerous in unskilled hands, leading to suspicions of spying, etc.

No Supervision

We turn now to another method in use in a telephone company. Here interviewing has replaced supervision as we usually understand it.

I am told that in the old days in the

switchboard room of a telephone company there would be a long line of girls at the switchboards making connections for subscribers. Behind these girls there would be striding up and down, all day long a strong, tough, he-man woman supervisor. Her job was to keep the girls on the job. Whenever she saw a girl making a mistake or not smartly making a connection she would poke the offender in the ribs. This may be exaggerated, but I understood the system worked something like that.

Later as more humanitarian views came to affect employee relations the floor supervisor was given a stool or chair to sit on. So she sat watching the girls at work, and only approached them when she saw them not doing their work properly.

In the Company which has tried out the method I am now describing, there is no floor supervisor. A girl instructor listens in to hear the way in which girls handle calls. If she finds that a girl has difficulties, the instructor finds these things out by her listening and makes necessary arrangements for instructing, etc.

The person who is called supervisor really is there to handle difficult or unusual calls.

Three Cases

Thus there is no supervision in the sense in which we usually understand it. This is replaced entirely by periodic interviews by the chief operator. These interviews take place in some quiet corner away from the main working place.

Let us hear some reports of these interviews.

Case 1

Shy, hesitant, and reserved type until you gain her confidence. Says she has never liked operating. Finds it dull and monotonous unless on some special feature of the work. Is interested in clerical work only and feels she will never be anything else but an operator. This makes her unhappy and discouraged at times as she would like to progress.

Finds it very difficult to manage, as she and her young brother, who only earns eight dollars a week, are the only support of the home (four people in the family, father dead). She seems to have the entire worry and responsibility of the home and at times has had to have outside help. This has made her very sensitive and bitter, and is probably the reason why she does not mix with the staff. This is also the reason for her limited social interests.

Treatment: Have been trying to help this operator for years to overcome her nervousness, timidity and self-pity. She did not seem to get along with her father when he was living and this, connected with her home responsibilities after his death, has affected her health and entire outlook on life. Suggested she get in touch with Company library and get some books also that she might join a club in connection with her church. She says she does not like crowds or meeting people as she always finds herself criticising them. She really seems to be making an effort to come out of herself. Has a certain amount of ability but breaks down under the least strain. Seems to be improving in health and gaining more stamina; requires a lot of sympathy and understanding.

Case 2

Very talkative type who seems to think her length of service entitles her to have her own way in most things although she does not abuse any privileges or try to cause trouble.

She thought the reserve staff should be allowed to remain for a longer period in the office after they were trained as it was very hard on a girl being sent back and forth between the offices. She found that being left in this office for such a long period as the last one helped her with her work and she developed a liking for it. She does not like her hours when she has to work after nine o'clock at night. She says she knows this cannot be helped and she could have a choice of day work in another office but does not like it. She finds it difficult to manage with so many forced days. Her parents are dead and she keeps a small apartment by herself. If her brother did not help her at times she could not meet expenses. She says she likes to live quietly, does not appear to have any special interests outside of fiance and a few friends. She thinks

there should be twenty minutes relief as the work is more difficult and trying.

Treatment: Two years ago when the present chief operator came to the office this operator was on the reserve and was just sent back from another office. She said it is very difficult for a girl of her age (35 years) to learn new work and after her length of service the Company should realize this. The advantages of this work was explained then and the chief operator promised to keep her long enough in the office to get used to the work. This was done and her attitude seems somewhat changed because she now likes the work and does not encounter any difficulty in doing it. While this operator seems to grumble a lot she is a rather loyal type and requires sympathetic understanding, and her morale needs to be bolstered up every now and then by giving her an opportunity to talk.

Case 3

Very fine type of girl, has had a lot of experience in clerical work and this is really where her interest lies although she says she likes the line of work and finds it extremely interesting. The more difficult the work the better she likes it. She says she likes the office and would not like to go back to the work she was doing before. She said some of the girls who had been sent back to another office, because they could not learn the work, said it was very difficult, discipline was severe, etc. She said she had no difficulty in learning, and had been very well treated and, in fact, things were run more smoothly and fairly than any office she had been in. She found it very trying at home during the past year or so on account of the death of her mother; all the responsibility has fallen on her. Therefore, she has been very glad of her forced days, it has helped her out considerably. She keeps house for her father and two brothers, one only going to school.

Treatment: No treatment was considered necessary in this case.

Here we see a unique method of industrial management. No supervision, but an underlying hypothesis that the girls naturally want to do their work well for the Company. Together with this there is a recognition of the fact that there are many factors, some real, some imagined, which interfere with and spoil this natural desire. Hence the interviews which are to help the girls in their

difficulties so that their work will not be adversely affected.

New Industrial Management

You can see how far this is from the old concept that a worker will not work unless he is made to. Unfortunately over large areas of industry this old concept appears to be true, at any rate we arrange our management policies as if it were.

But this telephone Company has managed to operate on a different hypothesis, and you can see from the human stories of these girls how well they have responded.

I do not know how far this method is widely applicable. But I think with proper safeguards, it would be well worthwhile for other Companies to try it, particularly with female employees.

Employee as Individual

Let us now consider the third plan, which, I think, is possible of wide application.

Several years ago I was asked to assist a street railway company in the reduction of its accidents, particularly those in which the public were involved.

A preliminary analysis soon showed that unsafe men particularly had also on their records items showing fare irregularities, insubordinations, complaints from the public, damage to equipment, high power consumption, etc.

The safety problem was therefore seen as only one element in individual employee management.

When a man had an accident or other significant breach of rules, he was called to the Division Superintendent's Office to explain.

At first, I sat in with the Superintendent during these interviews. We studied the man's record before he came in, and then worked out the interview in such a way that the man was given ample opportunity to talk as much as he wanted to. After the interview we conferred as to what should be done with him. Let us take a case.

Listen before Talking

Barney Connor came in on an accident. He had had 16 the previous two years and had been severely disciplined several times. We let Barney talk. He said in substance, "I have a reputation as a good fast operator and I keep my car on time. That is the reputation I want to keep. Do you want me to slow down so that I won't have accidents?"

We sat with Barney and talked over his routes with him. We discussed the tight spots where he should go slow, and those where the traffic was light and he could make time. We talked about autoists and pedestrians and how to avoid them. Barney left in a mood to try to still further enhance his reputation by being the fastest and safest operator on the division.

Barney came through with a clean record and his running mate, Don Taylor, who had a similar bad previous record, and whom we didn't interview, also cleaned up his record.

Barney is typical of many cases where a man does not do his work properly because he does not understand what the Company requires of him, or thinks the requirements are impossible. Listening to these men to find out what they think and why they think it was the basic step in our method—listening before telling.

And so we listened to an amazing set of reactions and ideas. Men blaming the repair shops for sending out cars with defective brakes, running schedules too tight or too easy. One man who said, "I run my car over that route every day and never carry a passenger. If the Company can afford to do that they can afford to give us a raise." Supervisors who irritated the men, starters who let the men leave the terminals late, instructors who didn't know how to operate a bus as well as the men they were instructing, timetables that were made up so they were impossible to run, stationmasters who played favorites in giving out overtime, spotters who reported things they were incompetent to judge, inconsiderate passengers and family troubles of all kinds, and so on.

These were some of the things which the men had on their minds and they did not hesitate to speak their minds, whether it involved an acting supervisor or the General Manager. Each man had his own pet trouble, sometimes a chip he had been carrying on his shoulder for 10 years, and sometimes an incident of yesterday.

Results

What did we do besides listen and then talk? In the first place we trained the Division Superintendents to listen and then talk. Then we trained the Supervisors to learn the peculiarities of their men and to treat them accordingly. This was the main subject of foreman training.

We studied schedules, running times, maintenance methods, routing of cars, supervisory organization, signs and signals, rules, medical service, disciplinary methods and everything else which the men brought to our attention. We worked in and with the operating department to improve the smooth running of the organization. We did it not on the basis of armchair theories, or of what management thought ought to be done to increase efficiency but on the basis of the facts brought to light by the employees as to the things which prevented them from living intelligent working lives. This material was, of course, duly sifted, analyzed and interpreted.

Their problems were individual ones, seen only in a small sector, but all put together they added up to a total which affected major Company policies. Do not mistake me in thinking I am talking about a suggestion system—these ideas of the men were all often their alibis for their supposed misdeeds.

So we cut operating costs, reduced accident costs, and improved our service to the public by listening to the men. And more important we

lessened the individual misunderstandings, grouches, prejudices, frictions, and frustations, which had existed among the employees and in total eased the tension which had existed between the Company and the union.

Starting Point Provided

You see that this plan differs from the other two in that it provides for interview with the employee when there is a definite reason for it. And there being a definite reason you are obliged to do something about it. I am inclined to think that, in the present state of industrial organization, this plan can be more widely applied than the others and would be an excellent instrument to aid in collective bargaining.

Though I do not see any reason why accidents should be taken as a starting point, they do provide a legitimate reason for interviewing an employer. Other reasons are spoiled work, tardiness, etc.

I once investigated the accident situation in a large company. While they have quite an excellent record for few lost time accidents, I found that there had been during a year 19,000 visits to the dispensary for dressings to minor lacerations, etc. As there were only 6600 factory workers, you can readily see the frequency of visit per man.

A similar situation was found to exist in textile mills, shoe factories, and among bus and trucking companies.

Now it is my thought that these minor accidents and/or other incidents provide an opportunity for skilled interviewers to talk over with the men just how they came to hurt themselves. And that in such interviews, a tremendous amount would be learned of the individual reactions of the workers to their working conditions, to their fellow employees, to their supervisors, and to the Company. Then that this information should be sifted, analyzed and interpreted and necessary changes in function, organization, and corrective methods worked out with the operating departments.

My second case where this plan might be applied. You all know of profit sharing plans, supplementary compensation it is called. Recently after two months in which a company distributed nearly a million dollars in bonus to their employees, the employee representatives pressed hard for a straight 20% increase in pay, a 30 hour week, the right to elect their own foreman and six other such favors. In their arguments for these concessions employees *used entirely individual specific cases of real or imagined injustices*. The management of this company may say, "What is the use of trying to treat your employees fairly when this is their attitude. We had better give them nothing."

But this would be a superficial view. Actually down in the plant, and possibly even among the representatives, who as a group ask for major concessions, there are a host of individuals who are like the cases of Mr. Bunk, Tom, the fellow who couldn't get his 6¢, Barney. These men want to do their work properly, want to be loyal to and appreciative of the Company's policy, but yet as individuals they are thrust back into a position of frustrated opposition to the Company because nobody seems to care, they have no one to tell their troubles to, and no one who will do anything about it.

I firmly believe that if such companies as these, or any company for that matter would set up some plan such as I have described, whereby the individual employees are given an opportunity to tell their troubles, and some attempt is made to clear up those situations which block back the legitimate ambitions and hopes of employees, present antagonisms in bargaining would evaporate. Then management and workers could go forward on a basis of true employer employee cooperation such as no company has yet achieved. Socially we would then approach nearer to an ideal in which the worker enjoys his working life and develops in it.

The Most Important Objective of this Program is the Aid it Gives in the Rehabilitation of Workers for Private Employment.

Foreman Training *in* W P A

By EDWARD M. SMITH
Cincinnati Employment Center

THE employment of several million W.P.A. workers in a wide range of occupations makes desirable the giving of more or less formal attention to the problem of improving the skills of these workers and their foremen. Some of the workers are found to be highly skilled in the work to which they are assigned. Others have lost their skill during a long period of unemployment. Still others have had to be assigned to work in which they have had limited or no experience.

The maintenance of a high level of efficiency in the operation of work projects is obviously imperative in order to expedite programs and to prevent undue criticism of the operation of projects. That foremanship and

job training will be advantageous to the Works Progress Administration is generally conceded, but its sponsors believe that such considerations are relatively less important than the benefits to the workers themselves in rehabilitation for private employment.

The need for training has long been sensed and admittedly should have been undertaken as early as the days of C.W.A. It was, however, very naturally subordinated to the tremendous organizational problems involved in approving thousands of work projects and in placing three million unemployed to work in the shortest possible time. Early in 1936 specific consideration was given to the training problem and R. O.

Beckman of the employment advisory staff was assigned to develop and direct a formal training program.

Thorough Practical Training

It was at once apparent that training meant foremanship training—training *by* foremen and therefore *of* foremen—an axiom generally accepted in industry today. This holds as true for the nation's largest employer as for private industry; unless the foreman is taught to teach, the surface can barely be scratched. It was also recognized that a great deal of foreman conference training has been superficial and of dubious value. The position has therefore been taken that W.P.A. foremanship training must be thorough and productive of practical results, even though it be restricted in volume and not attempted on a widespread and ineffective scale.

The objectives of the program are as follows: to give the foreman a better conception of his responsibilities and relationships, to help him develop his natural ability to handle men and win their confidence, to convey simple principles effective in training workers, and to prepare the foreman for promotion and greater responsibility, either with W.P.A. or in private industry.

The plan of foremanship conferences adopted, together with text material in the form of manuals and discussion outlines, was built from the ground up in the course of experimental meetings with groups of W.P.A. foremen in Ohio, New Jer-

sey, and Indiana. Its content thus embodies the practical experience of the class of workers it is intended to benefit. As a final test of practicability, in the course of which further improvements were made, a large number of foremen in Indiana were put through an eight week, sixteen session course with gratifying results.

The W.P.A. plan represents a departure from the customary free type of conference in which the group selects a topic, and after tacking back and forth in an uncertain wind, arrived belated and at times bewildered somewhere near the port of destination. To conserve time and cover more ground, to steer more directly to the desired objective and to permit the use of a leader or helmsman of lesser capacity, the W.P.A. uses a controlled or regulated conference procedure. This is an outgrowth of a plan devised and used by Mr. Beckman when serving as Personnel Director for the Kroger Grocery and Baking Company of Cincinnati.

Discussion Leaders and Topics

Discussion leaders are provided with precise outlines for each topic which provide complete directions, even to the point of suggesting concrete cases and the manner of phrasing questions to bring out the discussion. The basic guide is supplied by charts summarizing the points brought out. Mimeographed summaries are distributed to the conferees at the close of the meeting, and are found to parallel very closely

the wall charts worked up by the group itself. Since the material has been developed with other foremen groups, it fits into a logical thought pattern for any W.P.A. foreman group, and oddly enough, does not destroy the impression of spontaneity on the part of those engaged in discussion—they carry with them a definite feeling that the conclusions arrived at are their own. The psychological effect on the foremen is thus very similar to that resulting from a free conference.

The list of discussion topics embraces the following:

- Avoiding Idle Time
- Carelessness
- Maintaining Discipline
- Putting the Right Worker on the Right Job
- Giving Orders
- Safety and Accident Prevention
- Planning the Work of the Project
- Leadership
- The Foreman as Instructor
- How to Demonstrate and Teach a Job
- Problems Confronting the Instructor
- Setting up a Systematic Lesson Plan
- Understudies
- The Dissatisfied Worker
- Heading off Labor Disturbances
- Care of Materials and Equipment

Particular emphasis is placed on training the foremen to train the workers, a subject which because of the difficulty of presenting it effectively through the conference method, has been slighted in most of the earlier conference programs.

The standard conference schedule calls for two meetings a week of an hour and a half each, after working hours, for eight weeks. Superintendents and engineers meet once every

two weeks in order that they may keep in touch with matters discussed by their foremen. Usually the foremen have elected to meet from 4:30 to 6:00 P.M. rather than in the evening. Attendance is requested, but is entirely voluntary. Leaders are recruited from the ranks of W.P.A. supervisors.

Most training programs have been undertaken with little effort to measure their results in a concrete or objective manner. At the outset of a demonstration of foremanship training conducted for W.P.A. in Indiana, it was hoped that definite measures of success could be found to supplement subjective opinion.

Results Checked by Ratings

One of the important steps undertaken was the separation of the foremen into two groups, one a training group and the other a non-training or control group. Performance reports or service ratings were obtained on both groups of foremen at the beginning and end of the training demonstration. A rating form was devised which proved to be of value in showing the relative standing of the foremen.

The performance report form used follows a check list pattern. In making an evaluation of a foreman's manner of dealing with subordinates, for example, the reporting officer finds the following group of check items in the form:

Fairness and impartiality in dealing with subordinates:

- a. Often unfair or harsh
- b. Sometimes unfair or harsh
- c. Fairly just
- d. Better than average
- e. Exceptionally fair and just

An analysis of the distribution of traits as revealed by this form proved of great help in determining on what topics emphasis should be placed in the training program; it disclosed in what respects the foremen were weakest and indicated which individuals were most in need of training.

The second rating makes possible a comparison of the trainees with those in the control group. A preliminary analysis of the second series of performance reports indicates a substantial improvement in the training group over the non-training group.

On W.P.A. projects, records of production are not available for the most part, so that such an index had to be eliminated as a possible means of measurement in the Indiana evaluation. In the opinion of the Superintendent of the Women's Sewing Project, where a point system was placed in effect in the course of the training program, substantial improvement in the volume of production was attributable to the training which the sewing room supervisors received. Other indices of results are found in the attendance record of those in the training course and in the opinions of the trainees and of superintendents and district officials.

Attendance Voluntary

Attendance at the conferences is voluntary, the only compulsion

brought to bear upon the supervisors being a preliminary announcement on the part of the management in hope that attendance will be maintained, and the sending out of a letter to each absentee calling his attention to the fact that the District Director is aware of his absence. In view of the fact that the conferences are held outside of working hours and that the foremen can attend or not as they see fit, the attendance record in Indiana is of value in indicating interest on the part of those enrolled.

During the month of May the attendance in the training groups ranged from 70 per cent to 98 per cent, with a total average of 82 per cent. During the month of June attendance ranged from 84 per cent to 100 per cent with an average of 92 per cent.

At the final meeting of the Indiana series the foremen and supervisors who had gone through the course filled out a questionnaire in which they were asked to record their reaction to the program. They were requested to be critical and altogether frank, and were not requested to sign the questionnaires.

Even after it is assumed that a certain number of enrollees responded to certain questions on the basis of what they believed those in charge of the training course would like them to say, the responses of the group reflect a substantial interest in the training program, and evidence of having changed their habits as a result of the training received.

In response to the question "How do you feel about the time spent in these conferences?" less than 2 per cent stated that it was of doubtful value, while 86 per cent declared it was "very worth while." None regarded the time as wasted. To the question "Would you have come regularly had attendance records not been kept and had you not been requested to do so by your superior?" 92 per cent replied "Yes." In answer to the question "Would you be interested in keeping on with these conferences for another month or two?" 78 per cent checked off "Yes." A number of those who replied in the negative indicated that they would be interested, but not during the hot weather.

The foremen were asked the question "To what extent have you changed your methods of dealing with men, due to these conferences?" The following responses are interesting:

	Per cent
Not at all	6.8
Spend more time and thought on planning	75.2
Been more careful about methods of instructing men	74.3
Taken more interest in the men personally	74.2
Been more concerned about having the right men on the right job	66.9
Have been able to cut down on idle time	55.6
Occasionally tried more constructive discipline	46.5

About 49 per cent respectively stated they had grown more reasonable in talking with their men, had been less hasty in making decisions, and better understood the men's point of view. 77 per cent had noticed improvement in their rela-

tions with their workers and other foremen since the meetings started. The enrollees were asked whether the conferences had given them better insight into their own defects or the defects of others and 85 per cent stated they better understood themselves. 59 per cent reported better insight into the defects of their workers. In answer to the question "Do you feel greater confidence in yourself in handling men as a result of these conferences?" 85 per cent answered "Yes."

Washington Satisfied

After the meetings had been under way for a week or so a considerable number of requests were received from foremen who were not included in the training group, asking that they might be allowed to attend. In the course of the conferences several different groups expressed a desire for further education along trade or technical lines in consequence of a keener appreciation for the need for training. Foremanship training thus brought out the need for trade training and paved the way for specific projects for worker training.

One of the W.P.A. engineering administrators from Washington was asked to make an independent investigation of the results achieved in connection with the work in the midwest. After interviewing a large number of those who had gone through training, and their supervisors, he reported in part as follows:

"The universal conclusion is that

the course is entirely successful in reaching its stated objectives. Every person reporting recommended without question its continuation and expansion.

"Each person stated that the course had rendered a particularly helpful service through training foremen in a better understanding of their relations with their men, in the administrative conduct of their operations, the greatly increased interest among foremen in their work, and the recog-

nition by each of the superintendents and others that this training had been evidently effective through results in the field. I asked each if there had been any ridicule by the more experienced foremen who attended these meetings, many of whom could well have conducted the program, and invariably the report was that not only had no ridicule been indicated, but that they all endorsed the importance of this work for other foremen, less trained."

WORKS PROGRESS ADMINISTRATION OF INDIANA

Report on the Performance of Made by

Project Number and Description

Direction to the officer making the report: Place an X in the blank space after each item on this and the following page which describes the work, performance and conduct of the Foreman or Supervisor whose name appears above for the period of the past two months. (Check only one item in each of the groups numbered 1 to 19. Check as many items as apply in groups 20 and 22. Write in any needed information in groups 21 and 23. Then sign the report and deliver it to your superior officer.

- | | | | |
|--|---|--|---|
| 1. Relations with other supervisors: | | c. Fairly suitable and effective | — |
| a. Often not satisfactory | — | d. More effective than average | — |
| b. Sometimes not satisfactory | — | e. Exceptionally effective | — |
| c. Usually gets along well | — | | |
| d. More satisfactory than average | — | | |
| e. Exceptionally satisfactory | — | | |
| 2. Knowledge of the characteristics and abilities of subordinates: | | 6. Willingness to make difficult decisions: | |
| a. Knowledge markedly limited | — | a. Often "passes the buck" | — |
| b. Knowledge somewhat limited | — | b. Inclined to "pass the buck" | — |
| c. Knows employees fairly well | — | c. Usually properly willing | — |
| d. Knowledge better than average | — | d. More willing than average | — |
| e. Knowledge exceptional | — | e. Exceptionally willing | — |
| 3. Skill in training subordinates: | | 7. Success in making and carrying out work plans in an orderly manner: | |
| a. Often ineffective or limited | — | a. Often not successful | — |
| b. Somewhat limited or ineffective | — | b. Sometimes not successful | — |
| c. Fairly effective | — | c. Usually fairly successful | — |
| d. More effective than average | — | d. Better than average | — |
| e. Exceptionally effective | — | e. Exceptionally successful | — |
| 4. Fairness and impartiality in dealing with subordinates: | | 8. Knowledge of the work supervised: | |
| a. Often unfair or harsh | — | a. Knowledge markedly limited | — |
| b. Sometimes unfair or harsh | — | b. Knowledge somewhat limited | — |
| c. Fairly just | — | c. Knows work fairly well | — |
| d. Better than average | — | d. Better informed than average | — |
| e. Exceptionally fair and just | — | e. Exceptional knowledge of work | — |
| 5. Character of discipline: | | 9. Willingness to take on new or additional work: | |
| a. Often ineffective or inadequate | — | a. Often too reluctant or willing | — |
| b. Sometimes ineffective or inadequate | — | b. Sometimes too reluctant or willing | — |
| | | c. Usually properly willing | — |
| | | d. Better than average | — |
| | | e. Exceptionally willing | — |

10. Resourcefulness in meeting difficulties:
 a. Often goes to pieces
 b. Easily discouraged by obstacles
 c. Usually meets the situation
 d. More resourceful than average
 e. Nearly always finds good way out
11. Skill in giving and following up orders and assignments:
 a. Often vague or inadequate
 b. Sometimes vague or inadequate
 c. Fairly definite and adequate
 d. Better than average
 e. Exceptionally effective
12. Ability to learn new work:
 a. Learns with difficulty
 b. Learns somewhat slowly
 c. Learns fairly easily
 d. Better than average
 e. Learns with exceptional ease and speed
13. Initiative in own work:
 a. Often lacking in initiative
 b. Sometimes lacking in initiative
 c. Shows fair initiative
 d. More than average initiative
 e. Shows exceptional initiative
14. Control of temper and emotions:
 a. Emotions often impair work
 b. Emotions somewhat impair work
 c. Emotions usually well controlled
 d. Control better than average
 e. Exceptionally well controlled
15. Loyalty to project and WPA:
 a. Often not loyal
 b. Sometimes not loyal
 c. Usually loyal
 d. More loyal than average
 e. Exceptionally loyal
16. Volume of work done by this group:
 a. Output markedly limited
 b. Output somewhat limited
 c. Output average for the work
 d. Output more than average
 e. Output exceptionally large
17. Quality of work done by this group:
 a. Faults frequent or serious
 b. Work sometimes careless
 c. Work usually free from serious or numerous faults
 d. Quality better than average
 e. Work nearly always free from faults
18. Working himself and directing others:
 a. Often does too little or too much of the work himself
- b. Sometimes works or "bosses" too little or too much
 c. Satisfactory combination of working and directing
 d. Better combination than average
 e. Nearly always combines working and "bossing" exceptionally well
19. Standing in own group and field as a supervisor:
 a. Near the bottom—inexpert
 b. Below the average—indifferent
 c. Average—fairly competent
 d. Above the average—very good
 e. Near the top—exceptionally good
20. Miscellaneous favorable traits:
 (Check such of these items as apply and as are advantageous in the work)
 a. Has helpful outside contacts or interests
 b. Well trained technically for the work
 c. Often substitutes in higher positions
 d. Working hard to fit self for advancement
 e. Exceptionally courteous to others
 f. Has unusual "common sense"
 g. Has fine sense of humor
 h. Exceptionally good appearance
 i. Has unusual interest in work
 j. Welcomes suggestions from superiors
 k. Uses exceptionally good English
 l. Observes safety practices closely
21. Other favorable items (specify):
 a.
 b.
22. Miscellaneous unfavorable traits:
 (Check such of these items as apply and affect the work adversely)
 a. Unduly opinionated or stubborn
 b. Given to sarcasm
 c. Inclined to gossip
 d. Wastes much mental or physical effort
 e. Lacks "common sense"
 f. Outside interests impair work
 g. Lacks proper personality for a foreman
 h. Has poor sense of humor
 i. Careless about appearance
 j. Uses markedly poor English
 k. Lacks needed technical training for the work
 l. Negligent in safety matters
 m. Supervision markedly "hardboiled"
 n. Supervision lax
 o. Too familiar with workers
23. Other unfavorable items (specify):
 a.
 b.
- Signature and title of reporting officer:

 Date

This Discussion of Training Methods is
Based on Experience over the last Three
Years with Four Different Management
Courses Comprising over 300 Members,
All Possessing Industrial Experience.

English Management Training Methods

By T. H. BURNHAM AND G. A. ROBINSON
S. E. London Technical Institute
London, England

THE following views are based on experience over the last three years with a total of between 300 and 400 individuals all possessing industrial experience. They may be divided into four groups:

(1) Works Management Course by the Case System, comprising young engineers, assistants in various works departments, of A. M. I. M. E. or equivalent qualification.

(2) Course on Labour Management Problems for Employment Managers and Welfare Supervisors.

(3) Works Supervisory Course for Foremen, the members ranging from chief foreman of a large works to charge hands.

(4) Works Supervisory Course for Forewomen, from chief forewoman and assistant employment officer to section supervisors.

In the accompanying table, sample syllabuses are given of courses conducted:

(1) Purely by the Case System.

(2) Purely by the Conference System.

(3) By a combination of the two systems.

Study of Actual Cases

The use of the Case System varies with the age and experience of the students, and the time at their disposal for study and preparation. Fortunately it is capable of supple treatment.

In the courses to which the present experience relates, all the members were in industrial positions, so that they did not have a great deal of time, and the statement of problems was necessarily shorter than in courses based on post-graduate full-time study.

The advantage of the Case Method

is its close touch with reality, as it confronts the student with actual circumstances and situations met with in a factory. Approximately 100 British firms have supplied managerial problems which have arisen in the course of their experience, and in preparing a solution the student has to exert, at least to some degree, precisely those qualities which are basic to executive decisions.

He must examine the problem in the light of the situation as a whole, discriminate the essentials, discern and measure on the plane of practical affairs the importance of the economic and personal factors.

Case System Course

1. Co-ordination of production and stocks.
2. Organization of a Progress Control System.
3. Workmen's compensation.
4. Co-ordination of production and sales.
5. Organization of a Research and Development Department.
6. Organization of a Suggestion Scheme.
7. Organization of a special line in a mass-production works.
8. Allocation of responsibility for a customer's complaint.
9. Loading a machine shop when rush orders are expected.
10. Reorganization of a foundry.
11. Organization of accident prevention.
12. Establishment of a Planning Department.

In addition to the preparatory work imposed upon the student, involving study and analysis, and the logical development and orderly arrangement of his proposals, he has to present them in an attractive and persuasive manner, as decisions are arrived at by majority vote in the absence of any overriding reason to the contrary.

Case System procedure is essentially dynamic; as the solution develops, rapid play of mind is necessitated and constant adaptation to the unexpected or unforeseen as the pro and contra arguments are educed. New ideas arise by a process of cross-fertilization and a method of struggle evolves—a counterpart of the struggle in practical business affairs. The meeting is alive, and usually alive with difficulties.

A form of case which reproduces the psychological clash of personalities is to investigate a complaint on a finished product. Members of the course take the rôles of works officials concerned with manufacture and are only informed of the facts which concern their own department. The rest of the members constitute a committee of inquiry, on which devolves the duty of tracing the trouble to its sources and of making recommendations as the result of their inquiry.

Company Executive Present

At whatever length a case is stated, there is always something missing, and it is felt that some further information is required. This is met by the presence of an official of the firm where the problem arose, who amplifies the circumstances either before or during the solution.

The rôle of the chairman is, of course, important in the constructive development of the discussion, preventing it pursuing unprofitable directions, setting view against view, exposing weaknesses, or eliciting substantiation of proposals.

After summary and statement of the proposed solution, the firm's representative compares it with the decision taken at the time, showing how the firm's plan of action was established. The student is brought to see that intangibles may be, and usually are, involved in managerial decisions.

It was found that the method of giving a solution in advance as a starting-point for discussion was not liked by the students, who preferred to integrate their suggestions 'from the floor upwards'.

It has been suggested that a combination of the Case System with lectures at strategic points has advantages, but with the students in question, who have already attended lectures and have an industrial background, it proved unnecessary.

With regard to works visits, which are a constituent part of the course, these are not made before the meeting, as the solution would then be apparent, but after the discussion, when the students are able to compare their suggestions with what they see.

It may be claimed that the Case approach via actual works situations inculcates breadth of view and practical commonsense in managerial technique. The meetings impart in some measure a feeling of responsibility and self-confidence, from the exercise of solid competence in the presence of keen and critical observers.

Conference—What to Do

The technique of the Conference System has so far been little developed. It involves building up in-

formation or judgment on a subject by the integrated experience of all members of the group. It represents achievement through co-operation, and corresponds to actuality from the fact that the complexity of modern industrial problems and the rapid evolution of human relations frequently compel the management to confer before a position can be finalized. Its success depends largely on the constitution of the group, but perhaps even more on the personality and experience of the leader. The inherent isolation, competitive rivalry, and not infrequent reticence of individuals make conference in the true sense difficult. The chairman has primarily to establish confidence and sincerity, to ensure the determination of each member to share his true attitude and deeper convictions, to build up a mutually helpful and constructive tone, and to see that the knowledge of everyone is enlarged and broadened.

This naturally involves the specific prior definition of subject and purpose. The problem for discussion should be announced in advance, preferably accompanied by a series of questions analysing the issue. By this means prior study is assured, as the members will desire to give precision to their views and to seek whatever information is available in support of their suggestions before subjecting them to the touchstone of other people's experience.

Conference System Course

1. The human factor in industry. Methods of handling labour. Problems of types and temperaments.

2. Qualities required of a successful foreman or supervisor.
3. The desirability of co-operation and co-ordination in working arrangements.
4. What responsibilities should be expected of a foreman or supervisor?
5. What is the foreman's relation to the Employment Department?
6. How can the foreman help in accident prevention?
7. Should the foreman have a say in rate-fixing and incentive payments?
8. Foremen's representation—relation to works committees.
9. Foremen's relation to employees and social activities.
10. How can a foreman best train employees?
11. How can a foreman keep track of his department's progress? What means has he of checking waste?
12. What is a foreman's responsibility for costs?

It is advisable for the chairman to give a brief overall survey of the content of the subject and to suggest a logical approach and development of the discussion, but without any insistence on this lead being followed. The contributions, being voluntary and spontaneous, will indicate in which directions the interests of the members mainly lie.

How to Lead

The group leader may have to bring the argument back to the main issues under discussion, or, owing to the slow process of deliberation, he may have to infuse new energy or a fresh point of view, but he will do this as unostentatiously as possible, making use of his knowledge as to those members who have special experience, which he will evoke at the appropriate moment.

The more efficient he is, the less will his control be felt, the discussion coming back naturally to his hands for clarification of issues or summary

of progress. Even when the discussion appears to be tossing round the circle like a ball, he must catch it long enough to work towards a definite deduction or conclusion. With a large group it is advisable to appoint a committee of four or five persons, who meet the leader before the conference and constitute a creative nucleus of the discussion. It is their duty to make short contributions or ask questions, either with a view to 'loosening up' or to start a fresh turn, or merely to be provocative; in fact, the technique of a small group leader is delegated to them.

It is also helpful to impose a break in the middle of the conference, which permits members to think over what has gone before and what they are going to say further, facilitates mixing, and enables the committee to bring unofficial pressure to bear on reticent members.

A problem arises as to the presence of an expert. Is he to speak first, last, or at intervals? Experience has demonstrated it preferable for his presence to be announced, but then to let the discussion develop naturally and for the expert to join in like an ordinary member at points where his guidance or experience will facilitate progress. As a training method the Conference System has the advantage of providing opportunities for the members to gain experience of the responsibilities and duties of a chairman or leader of a group. In practice volunteers are obtained for the succeeding meeting, who open with a survey of the content of the subject

and control the discussion, either answering questions or eliciting answers from the members. It usually proves an ordeal for students, who are inclined to refuse the position unless pretty conversant with the subject. In any case, the group leader should sit next to the temporary chairman, so as to be ready unobtrusively to help if the situation demands it.

As regards size of group, the Conference System has been extended with success to sixty members which would ordinarily be considered too large. But competent observers, who were sceptical when such a group started, subsequently remarked from observation that satisfactory results were being achieved.

It may be mentioned that in another group of fifty, it was suggested to break up into two groups which would meet finally to compare deductions and conclusions. This suggestion was unanimously voted down. The objections included that one half would miss the views of the other, and in the reunion a lot of ground would be gone over again.

Combined Case and Conference System Course

1. General problems of production as they affect the Labour Department.
2. Production and employment. Selection, follow up, and transference of labour.
3. The work of the Labour Department in promoting health.
4. Accident prevention and its relation to the selection of labour.
5. The non-vocational and the technical training of juniors.
6. The training and development of supervisors.
7. Problems arising out of legislation.
8. The trend of employes' services.

9. Staff grading. Horizontal and vertical movements.

10. Temperamental factors; their relation to production.

11. Problems of committee work.

12. Methods of introducing wage incentives.

Not for Amateurs

Both systems are suitable only for students of mature mind and industrial experience. Amateurism has no place in them.

Both techniques present practical difficulties, but with experience are calculated to evoke mental progressiveness, research, and enthusiasm. Both exert a character-building influence.

The Case System provides a practical solution—a compromise which will work when applied under every-day factory conditions. The Conference System gives greater opportunity to discuss underlying issues and fundamentals, to survey trends, and to envisage future development.

The two systems are complementary, and a combination constitutes the most desirable and helpful course.

The Case Method may be employed at a critical or strategic point in a conference to bring the discussion to the touchstone of practical affairs, or, alternatively, a Case meeting may demonstrate a wide diversity of views on a certain managerial subject, which will provide a subject for conference.

Paper delivered at Sixth International Congress for Scientific Management, London, England.

A Program to Aid in Harmoniously
Integrating the Numerous Specialized
Functions of Personnel and Industrial
Management.

New York Announces Joint Meetings

By GEO. W. KELSEY
New York Management Council

DURING the spring of 1936 representatives of the New York local sections of several management societies met at the Advertising Club of New York and organized the New York Management Council. This was done at the suggestion and with the cooperation of the National Management Council, the established central organ of the management movement in the United States.

At the meeting, George W. Kelsey, President of G. W. Kelsey & Company, 101 Park Avenue, N. Y. C., and Chairman of the Management Division of the American Society of Mechanical Engineers, was elected Chairman of N. Y. M. C.; Walter K. Porzer, of Lambert & Feasley, Inc., 400 Madison Avenue, N. Y. C., and

President of the New York Chapter of the Society for the Advancement of Management, was elected Secretary; and John W. Riedell, Treasurer of the Recording and Statistical Corporation, 102 Maiden Lane, N. Y. C., and President of the New York Chapter of the National Office Management Association, was elected Treasurer.

On announcing the program of joint meetings during 1936 and 1937 to be sponsored by the New York Management Council, Mr. Kelsey comments as follows regarding the organization and purposes of this project:

"The New York Management Council is an informal organization through which local societies and the local sections of national socie-

ties, concerned with various aspects of business and industrial management, cooperate in promoting the mutual interests of their members.

"With increasing specialization on numerous functions of management, it is of utmost importance that all phases be harmoniously integrated and intelligently controlled.

"Members of all societies participating in the New York Management Council project and their invited guests have an opportunity to make helpful social and business contacts outside of the specialty in which each is engaged; an opportunity to participate in the discussion of timely subjects presented by outstanding authorities; an opportunity to tell and to learn for what each in his particular specialty is striving.

"The New York Management Council is affiliated with the National Management Council on a mutual advisory basis. It functions solely through delegation of authority by representatives elected or appointed by its participating societies and will in no way impair the individual identity of any of these organizations.

"Two years ago several organizations interested in managerial affairs in Boston, Mass., decided to hold joint meetings from time to time to which the entire membership of these organizations would be invited.

"By this program it has been possible in Boston to obtain the best talent available and to conduct successful meetings, to the benefit of all the societies participating, without imposing on qualified speakers and

discussers by asking them to address several small groups on separate occasions. Of equal importance is the fact that these joint meetings have broadened the range of subjects and personal contacts to the advantage of all concerned.

"Inspired by this example and under the auspices of the National Management Council a program of joint meetings on industrial and business management was held in the New York Metropolitan area during the past year, to which local members of all societies associated with N. M. C. were invited. It was largely to assure the continuance of such joint meetings in the future that the New York Management Council was formed.

"By applying a nominal registration fee at joint meetings sponsored by the N. Y. M. C. but conducted by participating societies in the Council, the N. Y. M. C. is to be self-supporting."

The following societies and associations are now participating in the N. Y. M. C. project:

American Institute of Accountants
American Institute of Consulting Engineers
American Management Association
American Marketing Society
American Psychological Association, Inc.
American Society of Mechanical Engineers
Association of Consulting Management Engineers
Econometric Society
Greater New York Safety Council
International City Managers Association
Life Office Management Association
Market Research Council
National Association of Cost Accountants
National Federation of Sales Executives
National Office Management Association
New York Credit Men's Association
New York Society of Architects

Personnel Research Federation
 Purchasing Agents Association of New York
 Management Division, Real Estate Board of New York
 Sales Executives Club of New York
 Society for the Advancement of Management
 Society for the Promotion of Engineering Education
 Trade Association Executives in New York City

The program for 1936-1937 embraces nine meetings, one each month, from September, 1936, through May, 1937.

At the September 15th meeting, James O. McKinsey, Chairman of the Board, Marshall Field & Company, and a partner of McKinsey, Wellington & Company, spoke on "A Challenge to Management."

At the October 6th meeting, Walter D. Fuller, President of the Curtis Publishing Company, spoke on "Business Management Today."

At the November 12th meeting, F. Alexander Magoun, Associate Professor of Humanics, Massachusetts Institute of Technology, speaks on "Men, Management and the Future."

At the December 8th meeting, Frank R. Coutant, Director of Research, Pedlar & Ryan, Inc., and President of the American Marketing Society, speaks on "Discovering and Developing Markets."

At the January 7th meeting, Harry Arthur Hopf, Managing Partner of Hopf, Kent, Willard & Company, and Deputy President of the International Committee on Scientific Management, speaks on "The Office in Business and Industrial Management."

At the February 9th meeting, Dr. Charles F. Roos, Director of Research, Cowles Commission of Research in Economics, speaks on "Ex-

pected Contribution of Economic Theory and Measurement to Management."

At the March 9th meeting, Saunders Norvell of Ingersoll & Norvell, Inc., and Chairman of the Board of the National Federation of Sales Executives, speaks on "The Human Side of Business."

At the April 6th meeting, John T. Briggs, Architect, and Secretary of the New York Society of Architects, speaks on "Layout for Income."

At the May 4th meeting, C. Canby Balderston, Professor of Industry, Wharton School of Finance and Industry, University of Pennsylvania, speaks on "Profit Sharing."

Meetings are being held in the auditorium of Metal Products Exhibits, International Building (630 Fifth Avenue), Rockefeller Center, at 7:45 P.M.

Registration fee to members of participating societies, 50¢. Guests presenting tickets signed by members, 75¢. College students, 25¢.

NOTICE

Of special interest to personnel executives is the meeting on Thursday, November 12, at 7:45 P. M., Metals Products Exhibits Auditorium, International Bldg., Rockefeller Center, on "Men, Management, and the Future."

Chairman: Gen. R. I. Rees, Asst. Vice-Pres. in Charge Personnel Relations, American Telephone and Telegraph Co.

Speaker: F. Alexander Magoun, Assoc. Prof. of Humanics, Mass. Instit. Tech.

Discussion by: Ovid Eschbach, American Telephone and Telegraph Co.

Henry C. Link, Psychological Corp.

Beryl R. McClaskey, National Sugar Refining Co.

A Survey of Kentucky's State Employees has Led to the Establishment of a State Department of Personnel Efficiency to Introduce the Merit System.

Personnel Survey of State Employees

By HENRY BEAUMONT
University of Kentucky

IN THE Spring of 1934 the Kentucky legislature passed a Reorganization Act, designed to reduce the cost of government to the State. The Act went into effect on July 1st of that year.

The present study was undertaken during the summer of 1935 in order to discover the effects of this Act on the number of State employees, monthly payrolls and stability of employment. This study was sponsored by the State Planning Board of Kentucky. Data were obtained from records in the Auditor's, Treasurer's, and State Inspector and Examiner's offices in the State Capitol at Frankfort, Kentucky. An attempt was made to obtain a representative rather than a complete picture of the situa-

tion, since it was realized that detailed information would not be available on every department and on every phase of the problem. Seventy departments with a total of about two thousand employees were included, the most notable omissions being the State Highway Department and the State-supported educational institutions. Comparative data were obtained for the months of May, 1933, May, 1935 and July, 1934, the first month after the Reorganization Act went into effect.

Payrolls Increase

Table I shows the number of employees, monthly payrolls and average salaries, and total cost to the

State of the 70 departments studied for the months indicated.

It may be seen from the above table that there were 40 employees more in July, 1934 than in May, 1933 and 150 more in May, 1935 than in July, 1934. These increases amount to approximately 2 and 7.5 per cent respectively, while the increases in monthly

In order to determine whether this situation was general or limited to certain departments, individual fluctuations were studied in each department. This is shown in Table II.

It appears, then, that the ten-month period following the Reorganization Act of 1934 was characterized by substantially greater increases

TABLE I
Cost of Seventy State Departments

	NUMBER EMPLOYED	PAYROLL	AVERAGE SALARY	OTHER EXPENSES	TOTAL COST
May, 1933	1998	\$186,107.69	\$131.25	\$131,077.02	\$317,184.71
July, 1934	2038	186,954.50	132.34	243,220.00	430,161.50
May, 1935	2188	209,541.87	141.25	202,109.53	411,651.40

TABLE II
Changes in Salary and Number of Employees by Department

	NUMBER OF DEPARTMENTS	AVERAGE SALARY (OLD)	AVERAGE SALARY (NEW)	NUMBER OF EMPLOYEES (OLD)	NUMBER OF EMPLOYEES (NEW)	CHANGE IN PAYROLL
May, 1933-July, 1934						
Increased average salary....	22	\$120.86	\$141.93	704	713	+ \$5,445.90
Decreased average salary...	29	134.84	123.69	1244	1160	- 20,783.63
Unchanged average salary ...	13	130.75	130.75	50	51	+ 125.00
New departments.....	6		142.95		114	+ 16,059.54
Summary.....	70	131.25	132.34	1998	2038	+ 846.54
July, 1934-May, 1935						
Increased average salary....	39	120.12	142.54	1556	1640	+ 15,945.81
Decreased average salary...	20	155.76	143.45	442	308	+ 6,641.56
Unchanged average salary ...	11	132.88	132.88	40	40	0
Summary.....	70	132.34	141.28	2038	2188	+ 22,587.37

payrolls on those dates amount to .5 and 12.5 per cent and in average salaries .8 and 7 per cent respectively. Not only did the number of employees increase more rapidly after the Organization Act had become effective, but the same was true of the average salaries and the total payrolls.

in number of employees, amount of monthly payroll and average salary than occurred in the fourteen months immediately preceding the Act.

Comparison with Other States

In view of these increases it was decided to study whether the number of State employees in Kentucky

was excessive in comparison with that of other States. Even though it is readily admitted that information of this sort is not directly comparable, it is likely that it shows a certain trend. Table III lists the number of employees of the State of Kentucky per 100,000 inhabitants together with similar figures for certain other States. (Except for Kentucky, data for this table were obtained from L. D. White, *Trends in Public Administration*, N. Y., 1933.) The Kentucky figure was obtained by adding to the total used in this study an estimated 2,000 for the State

TABLE III

Number of State Employees per 100,000 Population

STATE	YEAR	NUMBER
Kentucky	1935	216
New York	1930	244
New Jersey	1930	241
Massachusetts	1930	343
Maryland	1930	427
California	1930	184

Highway Department and 1,500 for the educational institutions.

Replacement Rate

Finally, data were obtained which enabled us to determine labor turnover in the State departments during the period covered in this study. Thirty-four departments in which the total number of employees had remained practically constant during the two years were selected for this purpose because they were most likely to yield a picture which would not be influenced by temporary changes.

The names of all employees in these departments were taken from the departmental payrolls for May, 1933. With this list were compared the *Advices of Employment* for July, 1934 and for May, 1935. New employees as of July, 1934 were added to the original list and checked against the *Advices of Employment* for May, 1935. Finally, new employees as of May, 1935 were listed. Table IV summarizes the results of this part of the survey.

It seems safe to predict that during the first year after the Reorganization

TABLE IV

Stability of Employment

PERIOD	NUMBER OF EMPLOYEES (OLD)	CHANGE IN NUMBER OF EMPLOYEES	NUMBER OF SEPARATIONS	NUMBER OF NEW EMPLOYEES	STABILITY RATE
May, 1933-July, 1934....	1378	16	475	459	65.9
July, 1934-May, 1935....	1362	+17	393	410	71.9

Act was in effect the replacement rate of the preceding fourteen-months period would be matched or bettered. Special significance is given to this rate by the fact that this study covers a period during which there was no change of administration in the State government.

On the basis of this and other surveys of related interest, the present administration has taken steps to remedy the situation by establishing a Department of Personnel Efficiency, whose principal function is to introduce the merit system into the State Departments.

A Method for Controlling Personnel When There are Wide Fluctuations in the Number of Employees.

Personnel Audits of Pennsylvania E R A

By BOYD R. SHEDDAN
Pennsylvania E R A
and C. H. SMELTZER
Temple University

IN ANY organization of considerable size where there is a great variety of job classifications and considerable shifting from one job to another, the problem of keeping personnel in a straight line relationship is important. Such a straight line relationship means that the proper job classification or title is in constant agreement with the nature of work being done, and that each employee receives the remuneration warranted by his correct job classification.

One of the functions of personnel departments usually has been to make job analyses, to define and classify the different categories of work, and to establish the rates of pay. Then, as new people are employed, they may be classified in terms of payroll

title and their remuneration may be established within whatever range is allowed. However, after employment has taken place, the methods used to keep the personnel within the organization in a straight line relationship, that is, coinciding with the job definition and salary range, are quite varied and often relatively subjective in their execution.

A personnel audit procedure was built up in the Pennsylvania Relief Administration as a technique for making a relatively objective periodic accounting of the type of work each employee performs and its conformance with the proper payroll title and salary, and readjusting the payroll title and salary for those employees whose work has changed.

Personnel audits should differ from

financial audits in that they are pre-arranged and have none of the elements of a "surprise audit" in them. Better morale will be established if the employees feel that periodic checks will correct any discrepancy between the work they do and the salary they are paid. By bringing the personnel department into closer contact with the type of work the employees are performing, a feeling of mutual good will between organization and employee can be created.

Pay for the Job

The Pennsylvania Relief Administration is an organization of approximately 8,000 employees with more than 500 active job definitions. It had a personnel of over 15,000 at its peak. It is a large, scattered organization covering 67 counties and having 31 separate local administrative units. There are two major divisions, relief and financial; while the central office, with a staff of over 1,100, is divided into 9 departments.

The following policies were followed in making the audits: first, the status of each employee is based on the character of the work actually performed, rather than upon length of service or need. In other words, the policy is to pay for the job and not the person. Such a procedure naturally has certain disadvantages. Nevertheless, since the organization has had such a "mushroom" type of growth and since constant shifting of jobs takes place, it appears to be the only practical policy. (It should be stated, however, that a certain degree

of flexibility exists for length of service and efficiency by virtue of the salary range established for each job classification.)

A second policy is to pay fixed prices for certain routine clerical jobs and if employees are shifted from one type of work to another, their salary, likewise, will be shifted in line with that particular job classification and rate. A third policy is to make no salary adjustment greater than 25% in either direction. However, adjustments can be made monthly until the proper rate for the job is reached.

It is inevitable that with a program as varied and as changeable as the one under which a relief administration operates, many jobs will change, new ones be created, and others will become obsolete. Whenever, it is evident that a position is not covered by an existing definition, or where a combination of two titles does not describe the job, a new definition is prepared, after which the job is rated. A detailed discussion of this technique will not be presented here. However, it may be stated that the work is considered in its relation to other jobs in the organization, its relative difficulty, and the responsibility characteristic of it. It is rated by a number of people familiar with the work on the basis of a rating scale which has been used on all positions in the organization. The individual ratings are treated statistically and the job is graded as to difficulty and responsibility. In this manner the job is

brought into proper alignment with all other jobs within the organization. The fact that there is such a variety of types of work existing makes a long list of job definitions necessary.

Field Staff Cooperate

When an audit is to be made in a local administrative unit, the necessary arrangements are made several weeks in advance. During this period the local unit prepares a written account of all the duties of its personnel. The written account represents an analysis of the type of work each person is doing and contains the approximate percentage of time the employee devotes to the various phases of his or her work. After the necessary material is in readiness for the audit, representatives from the personnel department meet with a member of the field staff (individuals in charge of groups of local units) and three or four of the local executives. During the audit the duties and work, as represented by the prepared report on each employee, is discussed and acted upon.

The part played by the local executives is to contribute a portrayal of the needs of the organization, as well as an intimate knowledge of the active work performed by the respective employees. The member of the field staff will consider organization

problems—a good example of which is, whether the job should exist at all—and to represent the point of view of cost reduction and administrative efficiency. The function of the personnel representatives is to determine whether the payroll title assigned to the respective employees matches with the work done by him, and to supply the range in rates for the respective salary classifications.

With this procedure it is possible to make a rather thorough accounting of all personnel changes which have taken place, as well as all proposed changes. The payroll title and salary are thus kept in line. Since so many shifts in personnel occur because of turnover and a fluctuating case load throughout the state, it is important that a thorough auditing of the personnel take place periodically.

This auditing method enables individual changes to be made by the local administrative units as they occur, through correspondence with the personnel department. But semi-annual audits are now established at which time a general review is made of all employees. These audits are particularly valuable to the individual administrative units because they enable the local directors to check on the character of their organization, the necessary functions which should be performed, and the elimination of duplicate work.

Can a Battle Between Labor and Capital
With Increased Government Control Be
Avoided in America? Yes, If Capital
Accepts Its Social Responsibility.

Profits, Prices *and* Wages

By CHARLES S. SLOCOMBE
Personnel Research Federation, Inc.

CAPITALISM exists today in America in a less adulterated form than in any other country in the world. In Russia it has almost disappeared and in other European countries, notably in Germany and Italy, it has been so changed as to be almost unrecognizable.

The most basic concept of capitalism is the so called profit motive. While the capitalistic system has been modified by the introduction of agreements and governmental regulation, this central core has remained unchanged.

This core is the idea that the best way to make progress is for each person to work as he likes, to produce as much as he likes, and to reap corresponding rewards. Assuming that each man will want as big a reward as he possibly can get, he will have an

incentive to work to the full extent of his capacity both with his hands and his brains.

The man who is not affected by this incentive will be driven to do at least some work, by the fact that only thus can he obtain enough to live on.

Under this scheme poor unfortunates are taken care of by charity because a natural charitable instinct is supposed to exist with the desire to get on.

Through the course of time this system has, with periodic interruptions, worked out. There have been a sufficient number of people who were ambitious, and a sufficient percentage of these with conspicuous ability to develop America to the stage where it has one of the highest standards of living in the world.

The periodic interruptions have,

apart from those due to fortuitous causes such as wars, been caused by the basic weakness in the whole plan. If the profit motive works 100%, it becomes a scheme in which a man makes as much as he can, by any means he can, without any regard to what happens to anyone else, and without regard to what he is going to do with the profits when he has made them.

When the system runs away with itself through there being a large enough number of men of this type in positions of power and with enough ability to do the job thoroughly, we have a situation like that of the twenties.

War Hangover

A combination of circumstances was responsible for this. During the war period when the civil and industrial life of the country was mobilized and every effort bent to organize production on a massive scale, there were developed a large corps of industrialists of outstanding ability with a "win the war at all costs" psychology. In the absence of ordinary competitive conditions, they tasted profits such as had never been their's before. Also their vision was limited to the point of "war won." Thus they developed a psychology of just going on and on organizing on a bigger and bigger scale, producing more and more without any thought as to where it could lead.

So when the war was over we had an unusually large number of high

executives and financiers of outstanding ability in organizing, financing, and producing, but with psychology unbalanced by their recent experiences. Many of them had even risen very quickly during the period, and as executives had never had experience as true industrial leaders, who plan on a long time basis. These men perhaps thought that their actions in the war period constituted true executive leadership.

So in 1922 we saw this group of men go into action in a period of peace. They had finance in the profits made during the war, they had factories for mass production, they had trained engineers and skilled workmen, they had large markets in the rehabilitation of railroads and other neglected structures in America and the huge reconstruction program of devastated Europe.

In the next seven years we saw how amazingly the national income of a nation can be increased by such favorable circumstances.

During the war there had been no thought of a balanced national economy. Other matters were more important, for we had to win the war, and if the whole structure were thrown out of balance it was too bad, but we had to win the war.

Hence the men so actively working for profits, according to the best traditions of the capital system, had forgotten about a balanced national economy, which means among other things, maintaining markets for produced goods—generally thought of today, in peace time, as being deter-

mined by the purchasing power of the so called low income groups.

sideration if another debacle is to be avoided.

Hazards Overlooked

So one of the inherent hazards of the capital system, lack of balance, which always must be guarded against, was neglected for 15 years—too long a period.

The second hazard of capitalism, the proper use of profits made, was also forgotten. This was forgotten largely due to the war psychology of going on producing more and more, making more and more profits up to the "war won" stage, without thought beyond. The second great hazard of capitalism was thus also neglected, and profits were used in unwise ways.

Perhaps apart from their use in dangerous speculation, we may say that they were used in the proper way, namely, in investment in expanding business here and in Europe.

But in the expansion of European business particularly in Germany, a balanced national economy was also being neglected, as it had been during the war. Thus an impossible financial position developed here and abroad which led to the end in 1929.

We have made this postmortem of the Hoover-Mellon-Coolidge twenties because we think it shows up the combination of circumstances which led to the stupendous growth of national income during the period. It also shows the inherent hazards which were not guarded against then but which must be taken into con-

Statistical Hindsight

In those days industrialists, government statistical services and others, who might have been concerned, did not know that the system was becoming unbalanced. For the combination of circumstances which we have described had never been seen before, and so it was impossible to forecast what was going to happen with any degree of certainty. Today, with hindsight, we can see the more obvious things that were happening to upset the balance, and therefore know the safeguards that must be built to prevent the present up surge of prosperity from a disastrous reverse.

It is common practice for statisticians and economic students to study long term trends of development and to eschew serious consideration of short periods of 5 or 6 years. Consequently many of our statistical series run back to 1900 or to 1879 or some such date. The fluctuations and variations in these are smoothed out to get a picture of long time trends.

Such a method is excellent for certain purposes, but it has a crucial weakness. It hides changes in basic trends. While there is grave danger in regarding a hump or dip in a curve as denoting a change in underlying causative factors, the high low of 1923-1933, as the greatest swing that has ever occurred in the long record of business cycles is certainly a danger signal. It should be examined to see

if there are not now entirely new forces which have never existed before.

The result of such an examination is conclusive that we cannot go forward to a prosperity of the 1923-1929 type without at the same time going forward to a depression of the 1930-1933 type. The problem then is one of finding out what should be done to get prosperity without subsequent depression, *caused by the prosperity*, and who should do what has to be done.

diately see the result of engineering advances, and improved managerial practices, so characteristic of the more successful companies during this period.

(2) The value of the steel products shipped (gross sales), however, increased by only 17%. This was due to a fall in wholesale iron and steel prices. That is to say, the Steel Corporation passed to its customers a proportion of lowered manufacturing costs.

TABLE I
Operations of U. S. Steel Corporation 1924-1929
(Figures to nearest million or thousand)

	1924	1929	1929 as a percentage of 1924
Tons shipped.....	11.5 million	15.2 million	132
Gross sales.....	\$42 "	\$980 "	117
Gross sales (adjusted to price index).....	\$42 "	1,100 "	132
Operating income.....	142 "	198 "	139
Value of Plant.....	1,678 "	1,341 "	92
No. of employees.....	246 thousand	224 thousand	91
Payroll.....	442 million	419 million	95
Average annual wages per employee.....	1,800 dollars	1,870 dollars	104

Analysis of U. S. Steel

In order to get an answer to this problem let us study figures for the U. S. Steel Corporation as given in Moody's Industrials. (Figures available from 1924 on. Figures given here for 1924-1949.)

The following points may be noted from the table of operations shown above.

(1) From 1924 to 1929 with less physical plant or with a less valuable physical plant and with a reduced number of employees the Corporation was able to increase its production by 32% in volume. Here we imme-

(3) If we calculate what would have been the sales value of the increased production, if prices had not been reduced (and assume that the increased prices could have found buyers if prices had not been reduced), we find that sales in 1929 would have been \$1100 million instead of \$980 million which they were. According to this method of calculation we find that Steel saved its customers \$120 million by improving its manufacturing methods and reducing costs.

(4) Steel did not obtain reduced costs by depressing the wages of its employees, for the average annual

wages per employee on the payroll increased by 4%. As there was no appreciable change in the index number for the cost of goods purchased by the lower income groups during this period, employed steel workers of this Corporation were able to slightly improve their standard of living. In other words the purchasing power of this group was increased slightly. (Employees include wage earners and salaried employees.)

(5) On these counts, we see that Steel during this period enormously increased its production with reduced capital investment in plant, and with a decreased labor force. By these means it reduced its manufacturing costs, and passed part of the reduction on to consumers at the same time slightly increasing the purchasing power of the workers who at the end of the period were employed by it.

(6) But what about balance? If this corporation be regarded as typical of the successful large industrial corporations of the period and an examination of other such organizations should reveal somewhat similar figures, the question arises as to how far the distribution of values received for the goods manufactured contributed to an unbalanced national economy.

Return to Labor

(7) First there is the question of total return to labor. The number of employees declined and so did the total payroll, by 9% and 5% respectively. There are two considerations here. The tonnage produced per em-

ployee increased from 46.8 tons to 68 tons or 45%. Gross sales per employee from \$3430 to \$4370 or \$940. If the productivity of an employee increased 45% and the value of the products of his labor increased by \$940 was he not entitled to a bigger raise in wages than the \$70 which was all he got.

On the face of it, it looks as if he were entitled to more consideration than this. But it must be remembered that Steel was not in business for the benefit of its employees. It was in business to make profits for its stockholders, and so long as it did not depress the wages or working conditions of its employees below the conditions present in the beginning of the period, or fail to improve them comparably with general industrial practice it could not be said to be treating them unfairly.

This is on the assumption that the workers themselves did *not* exert any special or increased personal effort either by coöperating more heartily with management in developing new methods or markets, by ceasing or reducing their restriction of output (characteristic of many employees from top to bottom of all companies) or by exerting greater muscular exertion or skill. This assumption is probably true, as judged by general industrial experience even in the best companies.

Another assumption which raises a question, however, is whether in 1924 wages and working conditions were adequate so that they might properly be used as a basis for com-

parison. This involves the question as to how adequacy may be determined, whether by social and research agencies determining what base wages should be, what working conditions are not deleterious to health and safety etc., or by reference to the usual industrial practices of the time. By the latter standard it may be assumed that employees of the Steel Corporation had reasonably adequate wages and working conditions in 1924.

On these bases then it seems that because the Steel Corporation was able by the use of new engineering devices, the adoption of more logical and scientific management and personnel methods, to increase the quantity and value of the output per employee, this is no reason why the employees who did nothing to aid this improvement should receive any special consideration in the matter of wages.

Employees as Consumers

(8) Steel lowered its prices to consumers and stimulated their purchase of its products so that gross sales increased by 17% in value. But the return to labor in total payroll declined 5%. Thus the purchasing power of its labor force did not keep pace with the value of goods produced. In other words Steel increased its sales by \$138 million but reduced its payroll by \$23 million.

To take simple illustrations, an increasing proportion of steel was sold to automobile manufacturers, who expected to sell cars to Steel's

employees. An increasing proportion was sold indirectly and directly to railroads to build equipment, rails, bridges, etc., the railroads buying the steel products in the expectation that they would carry Steel's employees as passengers and transport to Pittsburgh and the Chicago area the goods the Steel workers would buy.

But with decreasing income of Steel workers how were they to buy the additional automobiles; how were they to travel more on the railroads and consume more goods brought in by railroads.

It is obvious that they could not do so.

We conclude therefore that the Steel Corporation by reducing its payroll over these six years contributed to a reduction in the purchasing power of some consumers. If all industrial companies were pursuing a similar policy it is obvious that all employees in manufacturing were losing their purchasing power.

Counterbalancing Factors

Were there counterbalancing forces?

Farm population in 1930 was 31,000,000. There were 1,600,000 employees of railroads and 10,000,000 wage earners in industry. If we assume that with dependents these last two groups include 30 million people and add them to farm population we have 60 million or approximately half the 1929 population of the U. S. Figures show that the income of this half of the population increased by only 5% during the 1924-1929 period.

Gross value of steel products we have seen increased by 17%. This was approximately the same (16.5%) as the increase in value of all manufactured goods. (Manufactured goods are for period 1923-1939.)

If the purchasing power of one half the population is not increasing as fast as the production of Steel and other manufactured goods there is a tendency for consumption to fall behind production. Two possible factors might offset and delay this tendency which ultimately must cause a breakdown.

(a) This 50% of the population might increase the proportion of their incomes which they spent on steel products and other manufactured goods. We have no evidence as to whether this was so or not.

(b) The income of the other 50% of the population engaged in trade, banking and other services might have increased faster than the increase of the farm population and industrial and railroad workers, and these traders, clerks and professional workers might also have increased the proportion of their incomes spent on steel and other manufactured goods.

This second factor unquestionably was present, and contributed very materially to the progress of the period, 1924-29. But it must be noted that the purchasing power of this group must increase nearly doubly fast to make up for the lack of purchasing power of the farm and industrial group.

Two other factors which might be

considered are increased exports of steel and manufactured goods, and increased government purchases of them.

Profits

(9) We have dealt with reduced prices and wages. The other factor is profits, and we see that operating income which is synonymous with profits rose by 39%.

Under the capital system, which was operative during this period, the object and purpose of the Steel Corporation was to make profits. It made steel to make profits, and succeeded.

Are there any standards by which to judge whether the increase in profit taken was too high or too low? Perhaps there is no final answer to this question, but there are several considerations which might be discussed.

We see the tremendous advance in profits as production increases, an advance that bears no relation to investment, or value of plant, but seems to be just a phenomenon arising out of the engineering and managerial skill of the present day.

The profit on output in 1924 was 16.9% of gross sales. Sales increased in the six years by \$138 million, and profits increased by \$56 million. That is to say, no less than 40% of increased sales went to profits.

Was this too much? In order to maintain purchasing power should the percent of profit have remained somewhere near the 1924 percentage, and the remainder been used to increase purchasing power, by reducing

prices still further or by not lowering the total payroll. If this policy had been followed by Steel and other similar corporations would a balanced national economy have resulted which would have helped to prevent the depression?

Why should Steel or any other Corporation not make as much profit as it can? Why should it sacrifice profits to reduce prices or raise wages? The only reason would be to protect its profits, in future years.

Use of Profits

Under the conditions of large scale manufacture that have developed since the war we see almost limitless profit possibilities in industry. Previously, while there were exceptions, profits were limited by sheer lack of factors such as plant, engineering managerial methods, and executive ability. But today these factors are such that extremely high yearly profits are possible. But these profits can continue only if there is economic balance in the country and unquestionably the potentially high profits of large scale industry must be used in helping to preserve this balance.

Another consideration faces us in this matter of profits, which goes back to the war psychology. Work to win the war and after that what? Nobody was concerned about what would happen when the war was over. So with profits, work to make profits, larger and larger profits. What for? What can be done with them when they are made?

The investment in plant of the Steel Corporation did not increase in the years when its profits were increasing, so there was little opportunity for investment there. And throughout the whole nation the supply of investment money today greatly exceeds what is required for expansion of plant and equipment.

But profits may be put to useful service in reducing prices or raising wages, and so can be built into the economic fabric of the country and so help to maintain its progress and stability.

Today there is no other use to which excess profits can be put. They can be made faster than they can be used (by large scale industry). Previously they were ploughed back into the business and used for development and expansion, but now without consumers, development and expansion are not needed. The only course 'open then seems to be to plough some of the potential excess profits back into the consumers, so that the need for development and expansion will again arise. The proportions which are used for these two purposes need to be worked out to preserve balance.

Though the proportion of profits spent on consumer goods is unknown, owing to the proportion retained as reserves and therefore not distributed as dividends, and the proportion of income of higher bracket recipients of dividends which is saved, it is probable that only a small part of profits go to increase purchasing power.

Steel Creates Own Problem

Thus we see the problem created for itself (and for the nation) by a huge corporation; advanced engineering methods, managerial skill of a high order, more than adequate financing for working capital, plant, and equipment, all combining to manufacture at minimum cost, and maximum profit.

How far shall it reduce prices, what shall it do about total payroll and what shall its profit policy be? These are new problems which we now realize existed in the twenties, but which were not then realized and on which there did not then exist adequate statistical information to aid in their solution.

Today there is every indication that we are heading into a similar period of development. How long the period of expanding profits will be no one knows. But we suggest that if the necessary thought is given to the subject of a balanced national economy the forces of prosperity need not become forces of adversity.

We have dealt with this problem of balance, as the problem of a single corporation. It is the problem of individual corporations so long as we maintain the capital-profit system in America. It has been common for public relations apologists to present to the public figures of the automobile and other industries showing how their increasing mechanization has led eventually to lower prices and increased demand and employ-

ment. It has been common therefore for industrial executives to think that if they proceeded along traditional lines of lowering costs of production, part of which lowering is a lowering of total payroll, taking part of the savings as extra profits and passing a part over to consumers in reduced prices, all will be well.

But the logic of events has proven that all may not be well under such circumstances. Balance must be maintained and cannot be left to chance. Whose concern shall it be?

We submit that it should be the concern of the individual large scale mass production corporation or industry rather than that of the Federal government.

Corporation Economic Research

Is it too absurd to suggest that the U. S. Steel Corporation might have taken perhaps a million dollars of its \$198 million profit in 1929, and spent it in economic and statistical research, so that the Board of Directors might have been wisely advised as to their price, wage, and profit policy? Is it too absurd to suggest that had they and General Motors and Du Pont and General Electric and other large corporations devoted funds to economic research, these large corporations would not have suffered the losses which they did during the depression?

Is it too absurd to suggest that they now appropriate part of their potential profits to such purposes? We do not mean by this having a staff

of economists who will turn out for public consumption figures showing that employment and payrolls are back up to what they were in 1929 (we have seen that what they were in 1929 was what caused all the trouble), or that the industry indirectly causes the employment of so many million workers in gas stations and road building, the usual propaganda material which always sounds canned and fishy. We mean sound economic research on the basis of which the corporation may act as a socially responsible economic unit. Is such a thing possible?

Can we visualize the chief economist of Steel sending in a report when the budget for 1929 was being made up, recommending that while it would be possible for the Corporation to make a profit of \$198 million, they should forego this profit and limiting themselves to \$150 million, give \$18 million to employees in increased pay or pensions, etc., and spend the other \$30 million on boosting consumer purchasing power by reducing prices. The probability is that had such recommendations been made and accepted by Steel (and in other kindred corporations) Steel would not have been in the red to the extent of \$120 million during the depression.

Social Responsibility

The U. S. Steel Corporation or any other such organization has the

choice of operating according to the principles of so called business statesmanship, which means accepting its responsibility to see that by its actions it does not tend to upset the national economic balance, or facing the interference of and taxation by the Federal Government. (Taxes on Steel increased \$25 million in the last 7 years.)

The capital-profit system, with its encouragement of free initiative, enterprise and energy has put America well ahead of any other country in the world. This system should therefore be continued, for there is much yet to be done. But the changed conditions of the last 20 years mean that there must be modifications:

It seems to us that these modifications had best be made within the capital-profit system, by corporations such as U. S. Steel Corporation recognizing that their continued progress and profits depend upon their own restrained and intelligent action, and that they have a responsibility not only to their stockholders but to the Nation. Only if they accept this responsibility and carry it out with an ability equal to their ability in engineering and management can the present system go forward. Only thus can the standard of living and culture of the American people under capitalism increase.

This is the first of a series of articles dealing with employee-employer cooperation. Inasmuch as this cooperation has an economic base, early articles will deal with economic

Eye Fatigue and Discomfort Directly
Affect Work. Today They Can Be
Eliminated. Two Doctors Tell Us How.

Better Lighting *for* Workers

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CURRENT PRACTICE in lighting is characterized by high and harmful glare which gets worse as the intensity of illumination increases, and little means are being provided for adapting intensity and placement of light to the various needs that arise. Adequate means for eliminating glare; for varying intensity and placement of light; and for commercial color-correction are the four essential points in good lighting. A worker using his eyes constantly cannot be expected to perform either his best or greatest amount of work when his eyes are fatigued or painful.

Like any other organ of the body, if the eye is to remain healthy and

efficient or to cure itself of any of its ills, congenital or acquired, it must first be put into a situation calling for the healthy exercise of its normal functions. Important factors in this situation are the conditions under which it is ordinarily called upon to work.

In this discussion we will consider the four most essential points of good lighting as they affect these working conditions: intensity of illumination, glare placement of light and brightness, and color of light. We have selected these not only because of their fundamental importance but also because we are completely equipped to provide hygienic conditions with respect to them.

Intensity of Illumination

One of the most outstanding facts with reference to intensity of illumi-

¹Ferree, C. E. and Rand, G. Uses and needs of variable illumination and a convenient device for obtaining it. *J. General Psychol.*, 1936, 14, 473-487.

nation is the wide variation that is found in the amount of light needed and preferred for different types of work, for different ages and for different individuals of the same age doing the same work.

Important factors in these individual variations are age, the refractive condition of the eye, health of the eye, clearness of media, size of pupil, susceptibility to glare, keenness of light and space discrimination, etc. *If too little light is used*, low visibility results and the eye undergoes all the strain and malfunctioning of its muscle equipment which result from its reflex efforts to clear up vision. *If too much light is used*, the excessively harmful effects of glare are experienced. For by far the greater number of people the range of toleration of intensity for the comfortable use of the eyes is comparatively narrow for light of Mazda quality and somewhere in this range is a pretty clearly defined preferred intensity for each individual.

While the correct adjustment of intensity is extremely important in the case of all eyes, it is of paramount consideration in case of those eyes which come under the care of the eye specialist. It is not enough to say that you shall or shall not use your eyes for reading or work, or to say that they shall be used only for a certain number of hours a day. The conditions under which they can be used should be prescribed and the prescription should be accompanied by the information needed to carry out the recommendation. In this

way not only would great benefit accrue to the eyes in question, but a much greater amount of work could be allowed.

Individual Needs

There are two ways of dealing with the situation with regard to the regulation of intensity of light to individual needs.

The more satisfactory procedure from the practical point of view is to use a test only for the purpose of finding out approximately what is needed and then to recommend the use of a local lighting unit provided with an intensity control over the range which satisfies the individual's requirement. He can then at any time and for any work adjust the intensity exactly to suit his needs. The purpose of the test in this procedure is that the examiner may find out the type of eye he is dealing with for his own enlightenment in relation to the care of the eye and that he may recommend the right type of lighting unit. To meet this need for a variable intensity, we have devised desk and table lamps, floor-stand lamps, bed reading and examining lamps, all provided with mechanical controls which change the intensity of light in continuous series but do not change the color or composition of the light nor the size, shape or location of the illuminated area.

It can, however, be ascertained exactly what the individual's range of toleration of intensity for the comfortable use of the eyes and his preferred intensity are. On the basis of

this information a prescription can be given advising him what intensity he should have. For this purpose and for the above procedure, instruments of the type of our variable illuminator can be very conveniently used. This procedure is not completely satisfactory because of the difficulty the individual will have in filling the prescription with such lighting equipment as he is able to procure. In this connection it should be remembered that the preferred intensity must be very closely approximated or the prescription will signally fail to accomplish its purpose; further that the exact amount of light needed varies with the kind of work, the time of day, variation in the condition of the eyes, etc. It is impossible satisfactorily to take account of all these factors in a single test period. Again, the individual may not even attempt to fill the prescription because of the trouble involved and the amount of technical knowledge and understanding it would entail.

Group Needs

It would be a very ill-considered practice in lighting to make a blanket recommendation for all people of a certain intensity of illumination or narrow range of intensity, even for the same kind of work. It will also be realized how difficult it is adequately to handle the situation of intensity by general illumination alone for any considerable number of workers. In some cases it is possible, by means of information obtained by

testing a group of workers, to distribute them in a room lighted by general illumination so as to give some consideration to their individual needs. One example of where we have been able to accomplish this result with notable success was in a room in a large publishing house used by fifty or more proof-readers. In this case a systematic measurement was made of the intensity of illumination of the room, and the proof-readers were each tested for the preferred intensity of light and then assigned to locations in the room that most nearly met their requirements. No significant change was made in the lighting of the room. The ideal way to handle the situation, however, would be to provide a suitable intensity of general illumination and use local lighting with variable control of intensity in the individual case.

Glare

The most acute problem in modern lighting from the standpoint both of hygiene of the eye and of the designing of lighting equipment has been, it scarcely need be pointed out, the elimination of glare.

In general the following subjective factors may be noted in susceptibility to glare: age, size of pupil, condition of the media of the eye, health of the eye and general health, marked asymmetry of refraction of the two eyes, high myopia and refractive errors that produce an irritable and super-sensitive condition of the eye, ocular and bodily fatigue, loss of sleep and

insomnia, etc.; and the following objective factors as predisposing to glare: reflecting power of surface viewed and character of reflection, size of reflecting surface, intensity of light, angle at which light falls on the work and breadth of angle of incident light, diffuseness of light, color and composition of light, high brightnesses in paracentral and peripheral field of view and their angular relation to the line of sight, etc.

Glare is of two types, simple glare and veiling glare. Simple glare is a too high brightness in any part of the field of view due to an excessive stimulation of the sensorium by light. In the center of the field it is commonly called glare on the work. In the peripheral field it is usually due to the source of light, the lighting fixture, high reflections, and poorly controlled or misplaced intensities of light. Glare on the working surface may also be of the type known as veiling glare. Veiling glare is an obscuring of the image on the retina produced either by an overlay of scattered light or by light reflected from the working surface which is not focused. The former is due to the diffusing or scattering properties of the lens and other media of the eye, and the latter to specular reflection from the working surface itself.

The experience of simple glare ranges from a feeling of too much light, or an annoying brightness, through the various stages of discomfort to acute pain. Veiling glare, causes eye strain or discomfort

through a misdirected and futile effort on the part of the muscles of the eye to clear up its images. That veiling glare should cause eye strain and discomfort is not difficult to understand. It is not so easy to explain the acute pain often caused by simple glare. This is perhaps due to a sharp contraction of the pupil, particularly if the iris is inflamed or supersensitive, or to some condition or reaction set up in the eye itself or in the sensorium. In any event it is a warning or danger sign that harm is being done to the eye. In connection with the pain and discomfort experienced, it will be remembered that the iris and other parts of the eye are richly equipped with pain nerves.

Eyes differ greatly in their susceptibility to glare. A study of this susceptibility and the factors that cause it, is a very important need to the care and welfare of the eye. It is especially important that glare susceptibility and the requirements relating to intensity of light should be studied in case of diseases of the eye and in case of some of the more serious defects in refraction and other refractive errors that produce an irritable and supersensitive condition of the eyes. We have, for example, observed the acute susceptibility to glare in cases of glaucoma, retinitis pigmentosa, iritis and conjunctivitis, high myopia, marked difference in the refractive condition of the two eyes, uncorrected or poorly corrected astigmatism, etc.

Placement of Light

A third important feature in lighting is the correct placement of the light. This problem was created with the devising of lamp shades for shielding the eye from glare and later giving these shades a reflecting lining to conserve and direct the light. When the opening of the reflector was turned down, the light was directed towards the plane of work and walls and ceiling were left dark or very poorly illuminated. On the other hand, when it was turned up, the light was directed to the ceiling and from there reflected to other parts of the room. This resulted in a disproportionately high brightness of ceiling and a correspondingly low intensity of light on the plane of work. Relief from the glare of the opening was obtained at the cost of a bad and inefficient placement of the light. As compromise between these extremes in the placement of the light, recourse was had to inverted translucent bowls or housings which reflected a part of the light to the ceiling and transmitted a part laterally and downward, to opaque housings or reflectors which directed a part of the light upward and part downward (direct-indirect units), and to diffusing globes.

While these units gave a better placement of light than either the totally direct or totally indirect units, the protection afforded against glare was very far from adequate. The most favorable placement of light

and brightness in respect to walls and ceiling is to have the maximum near the level of the eyes of the worker with an even and gradual decrease in both directions upwards and downwards,—thus giving the upper walls and ceiling, for example, less than the maximum brightness. The next step in the development of lighting fixtures has been the use of baffles in such a way as to give the minimum interference to the distribution of light from the source and the maximum protection against glare, as illustrated in the *Personnel Journal*, 1934, p. 338.

Placement for Individual Needs

An important feature in the designing of equipment for both general and local lighting is a provision of a means for varying placement of light to suit the needs of the individual situation. One of the difficulties in securing good lighting effects at present is the lack of flexibility and variety in this respect. The units that can be had ready-made of a stock or standard type differ rather widely among themselves in the lighting effects produced. Thus it is somewhat difficult to adopt the units that are available to such situations as are presented by different sizes and shapes of room, heights of ceiling, characteristics of walls and ceiling with respect to contour and surfacing, purposes for which the room or enclosure are to be used. This difficulty is sometimes met in what is called custom-made lighting by using

units of special design and more than one type of unit in the lighting of the enclosure. A further possibility, as will be noted later in the paper, is to provide in the unit itself for variability in the placement of light. This can be done with both general and local lighting units, perhaps most easily and conveniently in the local units. It is possible, for example, in the designing of local lighting units practically to eliminate glare from the working surface without undue loss of luminous efficiency by suitable means for varying the direction and placement of light on the work.

Colorless Light Better

Color and composition of light are to be considered of importance in the care and welfare of the eye for several reasons.

Colorless light gives the eye more power than colored light to see objects neutral as to color. This has been definitely shown by tests. The functions tested were acuity, speed of discrimination, power to sustain clear seeing and ocular fatigue. Black test objects on white and the reading pages were used as test material. In every case colorless light, i.e., color-corrected light or light of daylight quality, gave a better performance in all these respects than colored light. For colored light the best performance was given in the yellow (around wave-length $578\text{ m}\mu$). On either side of this there was a decrease towards the long and short wave-length ends of the spectrum.

Black on white gave better results than black on any color. If color is used for background, black on yellow gives better performance than black on any other color. In this connection it will be remembered that the visibility of an object depends upon its difference from the background as well as its size. This subject was discussed in considerable detail in the *Personnel Journal*, 1931, Vol. 9, p. 475 and Vol. 10, p. 108.

Color and composition of light as well as intensity are factors in causing glare, both simple and veiling. Glare comes at lower intensities for artificial light than for daylight and light properly corrected for color. And again it seems that colored lights differ among themselves in their tendency to produce glare. Just why these differences should be present in case of simple glare it is somewhat difficult to understand. In case of veiling glare they are doubtless due to the difference in the tendency of the media of the eye to scatter lights of different wave-length and composition.

Colored light is more apt to produce ocular discomfort than white light. This tendency also differs among the colors themselves. This is found to be true both when the lights in question are used as illuminants and when the eye is exposed to them without any effort or attempt to discriminate detail.

The effect of color on the eye's comfort and preference varies a great deal for different individuals. Eyes made irritable and supersensitive by

refractive defect and disease seem in general to suffer most from color in light. It may be said, however, that daylight and artificial light properly corrected for color are better for all eyes than colored light.

Better Lighting Now Practical

The practical correction of lighting faults is now possible for we have devised means whereby any intensity of light that would be needed both in usual and unusual lighting conditions can be secured with complete elimination of glare. This has been accomplished by the use of glare baffles or a plurality of non-reflecting shades of suitable size and shape so worked into the design of the fixture or housing of the source of light as to completely shield the eye from the glare of the lamp itself and all auxiliary reflecting surfaces, and to give such wide and uniform distribution of light as to entirely eliminate all high and uneven brightnesses on walls and ceiling. These baffles have also been used to meet the needs and requirements of local lighting. We have further included in local lighting the very important feature of variable intensity of light, as was

noted earlier; and in both general and local lighting, of variable placement of light; also provisions have been made for color correction when that is desired.

Our list of devices includes the following: inset ceiling and wall bracket fixtures for commercial lighting and the lighting of hospitals, offices and homes; bed reading and examining lamps; desk and table lamps; floor-stand reading and bridge lamps; lamps for the lighting of lecturers' and speakers' desks; device for lighting tunnels and corridors and for protection of glare from automobile headlights; lamps for the optician's fitting table and the refractionist's chair; etc.

We have considered it worthwhile to note these devices here in order to show that it is possible to carry out the hygienic measures with reference to lighting we have recommended for the care and treatment of the eye. Whether the means we have devised or some other shall be adopted, is of secondary importance. The primary thing is to show that such results can be accomplished in ways that are entirely practical and commercially feasible.

A New and Fundamental Achievement
at Industrial Self-regulation in
Industries Made Up of Small Units,
the Women's Apparel Industries.

Industrial Self-regulation

By BERTHA M. NIENBURG

Chief Economist, Women's Bureau, U. S. Department
of Labor

THE voluntary effort of employees and employers to work together toward solution of the complex problems in the women's coat and suit industry and the millinery industry has successfully reached the end of its first year. Recognition upon the part of employees that "fair and equitable standards of labor" can only be maintained in a highly competitive industry through the maintenance of "standards of fair commercial practice," recognition upon the part of employers that their welfare depends upon the maintenance of standards of labor as well as standards of fair commercial practice, in themselves indicate a scientific, dispassionate approach to difficult industrial problems.

The formation of the National

Coat and Suit Industry Recovery Board by nine-tenths of the member concerns in the coat and suit industry and 50,000 employees and the formation of the Millinery Stabilization Commission by four-fifths of the firms in the millinery industry with over 25,000 employees represent an effective merging of traditional group conflicts.

Organization of the Industry

Fifty years of expansion have not materially changed the internal structure of the women's outer garment industries. Instead of a centralization of manufacturing in relatively few large factories, in line with the development of modern American industry, large unit selling agencies have been combined with many small

scale manufacturing plants. Historically this type of organization grew out of the greater ease with which newly arrived immigrant tailors could be organized into sewing groups by neighbors than into factory groups by the merchant manufacturer who had to sell the garments. It has persisted because little capital is required to set up sewing rooms whose activities can be completely suspended when lack of orders warrants. It has been encouraged by the present day merchandising practice of placing small orders for a great variety of garments for quick delivery. Large factories carrying a steady overhead load, even though operated efficiently, have had difficulty in competing successfully under such conditions.

As a result of corrective legislation and many strikes during the last 50 years, the home sweat shop was eliminated in the coat and suit industry, and many of the worst abuses have been relegated to the past. But fashion factors and the seasonal character of the industry, the over-supply of workers and of sewing contractors have made earnings uncertain and price undercutting frequent.

Today the coat and suit industry has advanced farther than other women's apparel industries along the path toward stabilization. But even so, in February 1935, there were 2,423 separate operating units in the industry of which less than two-fifths were inside manufacturers, that is, manufacturers who buy materials, cut it up and sew it into coats or suits or wraps on their premises. There were

395 jobbers who made up designs and purchased materials, and who sold the finished garment. These jobbers called in 1,025 contractors to quote prices on making up different designs in specific materials. The jobbers have insisted hitherto that bids from many submanufacturers were necessary because each experimented with many styles. As the retailer pressed him for low wholesale prices, the jobber kept his manufacturing costs down by competitive bids from a large number of submanufacturers. Men who were employees yesterday thus managed easily to enter the ranks of submanufacturers, for little capital was required to rent a room and some sewing machines. Knowing little of price determination or cost accounting, they accepted work at impossible prices and in turn were forced to reintroduce sweatshop conditions to keep operating.

Such an industrial organization carries in its wake untold possibilities of disaster for employer, employee, and the public. Even in the year of increasing business ending February 1935, 298 coat and suit firms went out of business in New York City. While the employees in coat and suit *factories* numbered 29,700 their working conditions are continuously affected by the wages and hours of the 27,400 employed in the coat and suit contract and jobber shops.

Seasonal Fluctuations

While the services of 60,319 men and women were required during the

week of October 13 to produce coats and suits for the fall and winter season of 1934, only 29,524 were employed by December 8, and in the week of June 2, 1935, only 19,416 persons; that is, three times as many people are given employment at the high tide of demand as at its low ebb. Nor does employment mean full days of work with full pay envelopes. The amount paid workers varied even more widely than the numbers employed, being over five times as great during the week of March 24 as in the week ending June 2.

In an industry that gave some employment to over 60,000 people, only from 19,000 to 20,000 could count on some income during 52 weeks; another 20,000 had to earn in 29 weeks an income to support families for 52 weeks; and some 10,000 to 20,000 others received pay during only 17 weeks of the year ending February 2, 1935.

New Methods of Control

As has been stated earlier, the inside manufacturers, the jobbers, the submanufacturers or contractors, and the employees in the coat and suit industry have severally merged their interests to "promote the common welfare of the industry" by the formation of the National Coat and Suit Industry Recovery Board. This administrative body is governed by an executive board selected from the four regional boards that administer the industry's affairs in the four coat and suit manufacturing regions of the United States. In the metro-

politan area, where 85 per cent of all the coats and suits are produced, the membership of the Metropolitan Regional Board is elected from the International Ladies' Garment Workers' Union representing the employees, from the Industrial Council of Cloak, Suit, and Skirt Manufacturers, Inc., representing the inside manufacturers, from the Merchants' Ladies' Garment Association, Inc., the association of jobbers, from the American Cloak and Suit Manufacturers' Association, Inc., representing the contractors, and from the Infants' and Children's Coat Association. In the other regions, employees and employers from different cities are elected to the regional boards.

The problem of jobber-contractor relationship is vigorously attacked by this organization. In an amendment to the board's constitution, all members of the body who employ or deal with contractors or submanufacturers must list those actually required to produce their garments. While these may be changed from time to time as business warrants after a hearing before the local compliance board, the number of contractors is limited fairly closely to the seasonal requirements of the market.

Member concerns employing contractors or submanufacturers agree to pay producers for overhead, a minimum percentage of the direct labor cost in the production of garments. They also agree to pay an amount for labor cost sufficient to enable the contractor to pay workers the prevailing

wage rates and earnings set up in collective agreements within the region, or the actual rates of earnings fixed by specific collective or individual contractual agreements.

Wage and Price Determination

To determine what the productive labor costs on any style of coat or suit should be to yield specific earnings to the worker of average skill, a labor bureau has been set up in the metropolitan area. This bureau is ascertaining the time required in manufacturers' and contractors' shops for workers to produce standard types and grades of garments, so that a scientific basis may be available for determining prices of production and piece rates for the various crafts in place of the competitive price system existing in the industry. Today the various persons concerned in the price the jobber makes to the contractor adjust piece rates together; that is, the representative of the workers, the contractors, and the jobbers, as well as a representative of the labor bureau, work out equitable rates.

Working Conditions

The constitution of the National Coat and Suit Industry Recovery Board provides for the maintenance of present standards of working conditions in the following terms:

Article V.—Hours and Wages and Other Standards of Working Conditions.

1. If a member concern of this body is in collective or individual contractual agreement with labor, said

member concern agrees to maintain the standards and provisions of said agreement.

2. If a member concern of this body is not in collective or individual contractual agreement with labor, said member concern agrees to establish and/or maintain at least the minimum standard of wages and hours and working conditions established through collective bargaining between employers and workers in the region in which said member concern is located.

a. If for any reason these standards cannot be determined, then the standard of wages and hours and working conditions provided by the Code of Fair Competition for the Coat and Suit Industry applicable to the member concern in question as of May 1, 1935, shall be deemed the minimum standards to be established and/or maintained by said member concern.

The conditions of employment called for in the collective agreements now in effect in the several regions vary with the type of organization and character of work. The agreements state that there shall be no strike or lock-out during the life of the agreement and that an impartial chairman chosen by both parties shall settle all disagreements.

Compliance

Any member who violates a wage provision must make up the difference; if other provisions are violated, the concern is liable for damages and cost of investigation and hearings. Expulsion results from intentional

failure to abide by the constitution, bylaws, and regulations of the National Coat and Suit Recovery Board.

All coats and suits that are manufactured under the terms of the Board bear a Consumers' Protection Label. It is the employees' responsibility to sew this label into every garment as public notification that the garment has been made under sanitary conditions and by employees and employers whose coöperative effort is bringing much needed stabilization to the industry.

The sale of this label is the sole income of the National Coat and Suit Recovery Board. In New York City the Recovery Board pays the expenses of the Labor Bureau which has charge of all price settlement difficulties.

The Millinery Industry

The millinery industry was the last of the women's apparel industries to emerge from the custom-made stage of manufacture to a quantitative basis of production. With even greater seasonal and fashion difficulties to overcome than confronted the other women's apparel industries, it has also suffered from a radical change of type of product within the last ten years.

The milliner is a manufacturer, that is, he buys his own material, produces on his premises and sells his hats wholesale. However, the rapidity of style changes has made flexibility of plant essential so he has remained a small manufacturer, employing on the average 24 persons a

season. The smallness of his operations requires little outlay of capital for equipment, and credit is easily obtainable for supplies. Styles are quickly copied from the few large houses that originate design by attending style shows and watching the stores that carry the higher priced hats. Consequently there is a shifting of employees into employer ranks and back again when failure wipes out capital.

This small manufacturer has been as handicapped in getting fair prices for his manufactured hats as the coat and suit contractor has been in getting an equitable price for his sewing services. For he operates, between two millstones, well organized dealers in raw materials who fix their prices to him on raw materials, and well organized wholesale or retail dealers who practically dictate the price they will pay for his finished hats. Sixty percent of all finished hats are handled by syndicates that run the millinery departments of stores scattered all over the United States. In order to keep his shop busy the milliner has offered extra ornamentation without charge, special return privileges and high discount rates. The result has been utter confusion and bad feeling in the industry with as many as twenty percent of the firms failing in 1934.

The employee is as much a victim of this lack of stabilization as the employer. Twice a year almost half the workers in the industry are laid off. Some of them employed as blockers of felt hats can find no jobs

in the spring because spring hats require less blocking than felt hats; and some of the trimmers of spring hats can find no work in the fall because fall hats require less trimming than spring hats. With the coming in and going out of business of employers, many millinery workers have no particular employer but move about from one shop to another.

The Millinery Stabilization Commission is governed by a board of three members not connected with the millinery business. Firms controlling 80 percent of the production have entered into agreement to abide by the trade-practice provisions of the former National Recovery Administration code. They have agreed to maintain the collective agreements entered into with the United Hatters, Cap and Millinery Workers' Industrial Union. They hope, by developing a spirit of coöperation in the industry, to bring individual employees and employers together for common council.

The agreements covering working conditions aim to give employment to as many workers as possible. Weekly hours are fixed at 35, with the understanding that overtime cannot be worked unless all workers in the crafts affected are employed full time and unless all available seats and benches are occupied. Sanitary working conditions are required.

A minimum scale of wages is set up for each craft, a scale placed high enough to make up for some of

the irregularity of employment. A higher scale is used as a basis for settlement of piece rates for the average good worker. The piece-work prices are settled by employee and employer price committees.

While the Millinery Stabilization Commission counts on the unions to police these labor agreements, they in turn throw their force behind the union agreements, by preventing price undercutting and by strengthening the manufacturers' position in dealing with the wholesale syndicate and retail merchant.

The industry has no contractors and no home work. Its label is a guarantee that the hat is made under sanitary conditions, at the best wage rates the industry can now afford, and that the firms whose goods carry the label are earnestly seeking to find a way out of difficulties imposed upon them by a too seasonal and a too rapid fashion demand.

Consumer's Support

Although less than one-tenth of coat and suit manufacturers and one-fifth of millinery manufacturers have refused to enter into the coöperative agreements, these minorities are a constant menace to this forward movement for industrial stabilization. The Women's Bureau of the U. S. Department of Labor is urging all women buyers to support this movement by purchasing only coats and suits and hats produced by firms operating under the two boards.

A Sound Wage Policy Must Take
into Account both Personnel
and Economic Considerations.

Wage-setting Research

By C. CANBY BALDERSTON
Professor of Industry, Wharton School,
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NEARLY everyone who gets a pay envelope receives for his services a price that someone else has set. To the recipient of the envelope, the process of wage-setting is perhaps of more immediate concern than to the wage setter. The worker and his wife both scrutinize the contents and often consider how the boss could be so dumb as not to fix a rate that reflected the difficulty of the work. Some bosses do recognize the significance of wage setting, and it is in their difficulties that our discussion is centered. In management language, our purpose is to compare the analysis of jobs and occupations that should precede the setting of base rates with the standardization and time study that are necessary if extra compensation is to be paid on a uni-

form basis. By *basic compensation* is meant compensation that is not directly contingent on performance but which is related to the time worked. By *extra compensation* is meant that pay which is directly contingent on the quantity or quality of the work done. The former is used in most companies to designate status and to reward long service, dependability, and loyalty. It is also used to guarantee certain minimum protection to employees working under incentive. In contrast, financial incentives are used by management as a spur to action, so that the resulting improvement in output or quality will reduce costs.

No one is likely to question the aphorism that wages are at the heart of personnel relations, but some may wonder why this discussion is de-

voted to wage-setting research rather than to the more general considerations of wage policy. The reason is that company announcements that they pay wages, above the market, or that their policy is to pay "fair" wages are a delusion unless based upon the investigation necessary to make these statements come true. Many companies that claim to be paying more than the market do not know what the market is.

A sound wage policy must take into account personnel and economic considerations: the former, because the source of labor is human; the latter, because economic forces set the limits within which an individual enterprise must operate. The personnel considerations are necessary because each worker is a human being whose own affairs are immensely important to him. He is not likely to achieve his best results if the management thinks of him and refers to him as a number. As a human being, he is influenced tremendously by his feelings, and many of his emotions have to do with the fairness of his compensation. This fact that wages are both a human and an economic problem, rather than a mere question of price setting indicates that any research done by a company must reflect this point of view. Such an approach would bar occupational appraisals that pay no attention to what the employees think about the relative difficulty of work, as well as time studies made by untrained observers, who have

neither the ability nor the salesmanship to get the workers observed to participate in the study.

To clarify our discussion, it may help to indicate certain tests that will convey my concept of what is good compensation. Perhaps the first is that the pay of each individual should be based primarily on his current contribution to the enterprise rather than on his length of service or his need. If workers can actually influence their output to an appreciable extent, and if the work is susceptible of time study measurement, then financial incentives help a company to pay people according to what they do. The second of our criteria is that the rates of individual occupations and jobs should bear a satisfactory relationship to the rates paid elsewhere in the same company and to those paid in the same market. But whether or not financial incentives are applicable, it is always possible to make some kind of a systematic appraisal of the skill and the responsibility required by each occupation or job. To be in adjustment internally requires that rates should be in alignment according to the difficulty of the work done, and that the extra compensation should be based upon output standards of uniform difficulty. To be in adjustment externally requires careful determination of what other firms in the community and industry are paying for comparable work. A third test is that employee earnings on an annual basis should meet minimum standards of adequacy.

Determining Base Rates

Perhaps the most serious indictments of the wage practices of industrial firms is that they tend to pull their base rates out of the air with little or no study and investigation, despite the fact that many of them use care in setting their output standards and spend large sums of money for standardization and time study work. Our first comment about research underlying basic compensation is that too little of it is done and that we know too little about it.

Perhaps the general nature of the investigation that should be used in setting base rates and basic salaries may be indicated best by suggesting questions for which answers are needed. The first of these questions is: What is the work being done by those in each occupation and job? The answer requires a job definition or description rather than a specification such as would help in hiring. The definition, though brief enough to be usable, should indicate the kind of work done without enumerating all of the detailed duties and procedure. The place for the latter is in a manual of procedure. It should also give the scope of responsibility, especially in the case of supervisory jobs. Where possible, it should show some of the outstanding skills required, although in practice, this is difficult. Where performance standards have been set, whether in terms of output or quality or both, these should likewise be included.

The second question to be answered

is: How do the several occupations and jobs differ in difficulty and responsibility? What differences in skill are required? The solution involves the use of human judgment rather than precise measurement because skill and responsibility consist of imponderables. The procedure involved is to make an occupational appraisal either by rating their jobs with a graphic rating scale, by merely ranking them, or by using a combination of both methods. The result of this step is an evaluation of each occupation and job expressed in points so that whatever imperfections exist in the alignment of the existing rates may not be reflected in the appraisal of difficulty.

The third question is: How closely do the existing rates of pay correspond with relative difficulty and responsibility? To what extent the existing rates are out of alignment will be shown if rates are charted according to the degree of skill required.

The fourth question is: What rates are paid in the same labor market for comparable work? By the same labor market is meant either the rates in the immediate community, or among competitors in a larger area. The solution to this problem is made difficult by the lack of exact comparability between the work of the given company and that of other firms from which wage data are solicited. Even if an adequate sample of figures can be secured in a city like New York, Philadelphia, or Pittsburgh for a dozen occupations that are common

to the given firm and to the market, it will be found that the dispersion around the average is so wide as to destroy confidence in its representativeness. In short, the market is not portrayed accurately as a single line, but as a band which widens as one goes from the low- to the high-paid occupations.

The obstacles to securing a reliable comparison of wages among a group of firms are more numerous than those that have been referred to. They arise from the fact that some firms use incentives for work that others pay on a time basis, that no exact information can usually be secured as to output or quality, and that the hours worked vary as well as the relation of overtime to regular rates. Still other considerations are the relation of starting rates to regular rates, the weight placed upon length of service, and the ease with which a given company can secure help, which will in turn be affected by its location, its working conditions, and its reputation in the labor market.

Installation of Incentives

We now turn to the subjects of standardization and of motion and time study. Since we obviously cannot discuss this phase of management in detail, we will confine ourselves to certain strengths and weaknesses of time study from the personnel point of view.

It is assumed that financial incentives should be installed rarely, if at all, until after the work has been standardized and output standards

set that will be uniform. This means that management has an obligation to employees who are asked to work under piecework, or bonus or premium arrangements, not to initiate any incentive scheme until the preliminary management steps have been taken. Moreover, management has an obligation to see that the materials, machines, workplaces, tools, and equipment and methods are standardized, and that sufficient controls are installed to maintain the standard. This is merely saying that a given output standard is good only for one set of operating conditions and that if changes in the hardness of material, the speed of the machine, or the size of lot makes the work more difficult, the original output standards become unfair. If the methods followed by the operator are to be standardized before the time study is taken and if the time study observations are not to be cluttered with times representing poorly made motions, then the time-study men should also be capable of motion-study analysis. They should know instinctively the difference between good and bad motions. Moreover, if this argument is accepted, a different type of time study man is needed from that often employed. What is required is a man who can command sufficient respect from workmen so that he can win a measure of confidence and coöperation in a situation in which workers are naturally distrustful. As to the time study itself, a general criticism is that of the two major steps involved, the second is often

slighted. The first step is the determination of the selected operation time without any allowances for unavoidable delays; and the second is the determination of proper allowances for machine and handling delays and for fatigue. It is, of course, ridiculous to calculate a selected operation time to the hundredth of a minute, or the thousandth of an hour, and then to add some arbitrary percentage for delay. To repeat, the production study used to set the allowances should be made just as carefully as the determination of the selected operation time.

Errors in Time Study

Even thorough time study is subject to significant errors, some of which are difficult to avoid. One is the failure to observe the quality of work performed during the taking of the study. This difficulty can be met, of course, by having the work inspected if there are clear-cut quality standards. The sample of workers observed is likely to be inadequate even in large enterprises because of the extent of modern specialization. If a given machine is operated by only one person and if there are no other employees of equal skill, the observations have to be based upon the work of the single operator. The latter may be expert, average, or very poor, and his skill and speed will affect his

time. Although numerous devices, such as "leveling," are used to surmount this difficulty, the results are still weak whenever the sample of workers is too small.

Many other questions that must be solved prior to the installation of incentives are matters for administrative decision rather than for research alone. For instance, the bonus curve can be selected by no one but the top management. It is true that, in making the decision, they will want graphs and figures as to how the proposed curves affect unit costs and employee earnings, but even such a fundamental question as to whether the curve should give all the labor saving to the workers or divide it with the company is a matter for someone's decision rather than for research investigation.

The compensation of employees and executives needs more intensive study than is now devoted to it by most firms. It is a problem of price setting that demands thorough analytical investigation rather than rule-of-thumb decisions. But since labor as a service cannot be dissociated from the men and women who supply it, the research used must take account of their feelings and emotional reactions. What we have been advocating is not more statistical method nor engineering analysis, but their use in such a way as to take account of human values.

Do You Give Your Employees \$10,000
Words With Which to Sell Your Merchandise and Service to the Public?

“Tested Selling Sentences”

By ELMER WHEELER

Tested Selling, Inc.

THE problem of putting into the mouths of your \$15.00-a-week sales clerks the words and the phrases that a \$10,000.00-a-year executive would use were he at that counter selling the goods across the counter to the public has been solved.

Thanks to modern science, this little scheme is now possible because a work laboratory has been formed to give sales-people words and phrases that have been customer-tested to make sales more accurate, fool-proof, faster, than if you leave it up to the sales clerk to say something extemporaneously to the customer.

Tested Selling Sentences

What is the difference between ordinary sales conversations and Tested Selling conversations? What is the difference between the sales

vocabulary of an unsuccessful sales person and that of a successful sales person?

That is what, over ten years ago, a group of university professors set out to find, and the outgrowth of all the research that these professors did in their laboratories at Johns Hopkins and New York University and other research in over 360 stores representing nearly over 200 lines of industry, was the formation of the world's first and only word laboratory known as Tested Selling Institute. The purpose of the Institute is to weigh and measure the relative importance of words and phrases on customers.

Just as you are testing out your product, and just as you have advertising in magazines and newspapers that is tested to bring the people in to the store, this Institute has words

and phrases known as "Tested Selling Sentences" to sell the customer once you get him into your place of business.

The outgrowth of all these years of research was the dramatic proof of a fact that you know very well: That in all sales talks only a certain few words and phrases click open those little mental pocket-books in your customer's mind, and make that customer want to buy; that all sales talks are made up of hills and valleys, strong selling points and weak, but that only the hills, the strong selling points, really make the customer buy.

Those sentences which in sale after sale, customer after customer, make customers buy your goods, we term "Tested Selling Sentences," because those sentences are customer-tested, and have a known value.

All of us are using these Tested Selling Sentences consciously or instinctively from morning until night; some of you to sell ideas; some of you to sell service; and others of you to sell actual merchandise.

Source of Ideas

The nucleus of our ideas come not from the beards of professors, but right out of the chewing gum of the sales clerks. We study them for days and days and hear the sentences that are used. Once in a while out comes a good sentence. It may be buried in a long, lengthy line of meaningless words, but it is there, and we will take that little sentence back to our laboratories, and we will compare it with other sentences. Here is a

composite sales talk being used by the Schulte-United Co., to sell Indian moccasins to little boys. See if you can pick out the Tested Selling Sentence. It was right there, but was buried in a long, lengthy sales talk.

The woman would be seated in the shoe department getting a pair of shoes. The salesman was smart enough to wait until he had the woman's shoes off so she could not walk out of the store before he came in with the Indian moccasins.

This is the sales talk he would use: "Madam, wouldn't you like to buy a pair of these real Indian moccasins for your little boy? They have triple stitching around the back and they will last a lifetime. The beads are put on with twine and they will never break off. They have blunt toes instead of pointed, and your little boy's feet will grow straight and healthy all the rest of his life. These moccasins used to sell for 67¢, but we have a special clearance sale on today and they are only 47¢. Wouldn't you like to buy a pair for the little boy, and maybe his brother or sister or some of the neighbors' children?"

By the time he got through with that long sales talk the woman had her shoes already on and she was out of the store. So we instructed them to do one thing. Bring the moccasins in, put them down in front of the little boy, and the only sentence we wanted them to use was this: "The kind the real Indians wear, sonny," and then start waiting on the mother,

and see what would happen to that little boy's imagination.

That sentence would so fire the little boy's imagination that he would slide down off the chair and pick up those Indian moccasins, and he became an assistant salesman and began to work on his mother.

What does that child care whether the beads will last five minutes or ten years? What does he care whether the moccasins are healthy or unhealthy for his feet? He visualizes just one thing: That he can go up and down the streets pointing to his moccasins in front of all the kids in the neighborhood and say: ‘‘Whoopie, the kind the real Indians wear.’’

We call that a Tested Selling Sentence because that sentence is tested in actual cases on customer after customer, and is guaranteed to sell every three out of thirteen children Indian moccasins, as an extra sale. If you do not believe it, just try it on thirteen little boys and see if you do not sell them a pair of Indian moccasins.

Brevity

A lot of you are saying: ‘‘Well, I can see where a certain sentence will click on a small item, but I am in the insurance business, and it takes more than a sentence to sell life insurance.’’ Or: ‘‘I sell automobiles, and, boy, it takes more than one sentence these days to sell automobiles.’’

We do not believe in a long sales talk. We do believe, though, that even in long talks certain words and phrases should be shot out at your customer, words and phrases that you

have had tested for you and that you know what is going to happen in your customer's mind when they are used.

We do not believe in the long canned sales talk. You know; the man who calls at your front door with a shoe-brush and proceeds to tell you the history of that shoe-brush from the time it left the Rocky Mountain nanny-goat until it arrived at your front door, all before you can say: ‘‘Aye, yes, or no’’; ‘‘You do not live there’’; or: ‘‘The lady of the house died that morning and you are the undertaker.’’

That is not the way to make a sale. We do not believe in that. But we believe that certain words should be put into the longest sales talk, and that wherever words or phrases are used on your customers, they are very valuable in making the sales.

Sloganizing Sales Talk

We found sentences for The Texas Company, the Hoover Corporation, Johns-Manville, Hotels Statler, and others. We took a toothbrush at Saks, Bloomingdale, Abraham & Straus, and William Taylor & Son, and for the first time in the history of those stores they completely sold out of toothbrushes—and in less than one week!

We took Bost toothpaste, and circulated the dealers to use certain sentences when a customer came into the cigar counters. One letter we got just recently said: ‘‘We have sold a six months' supply of Bost toothpaste in one single week in a chain of Ohio

drug stores." When you went into those stores to buy your cigars the clerk did not say: "How are you fixed for toothpaste today?" or, "Do you need any toothpaste?" but he said: "Have you ever used the smoker's toothpaste?" And when you said: "No, what is the smoker's toothpaste?" he would say: "Bost; it is made especially for people who smoke."

Two simple little sentences, and yet they did not just pop out of the air. We do not get these sentences as brilliant brain children. We are always afraid when a sentence pops out. We want to make sure. We take a sentence and we test it out on a customer. We have 105,000 of these Tested Selling Sentences today that represent over 5000 different items. These sentences have been used on over 20,000,000 customers to date.

We have what we term a "Gravitation Method" that inspires the dealers and sales people to use these Tested Selling Sentences, and to supply us with records of the number of times these sentences are used on a customer; the number of times the sentence sold, and the number of times the sentence failed to sell, so we can tell with mathematical precision the relative value of one sentence against another.

The Barbasol people recently asked us whether we could help them. Well, you know what happens today in stores. There is just a limited amount of traffic because the traffic has to be divided up with com-

petitors, so we have to get every dollar out of that traffic. The unskilled manager gets hold of his group of sales people and he says: "Come on, now, fellows, push the merchandise, push it, get that extra sale; get that extra sale," and what happens? You go into the store and the clerk says: "How are you fixed for shaving cream?" You say: "All right, how are you?" Then the clerk will say: "Would you be interested in buying some of these nice razor blades today?" and you will say: "No, I have plenty."

And then the clerk will proceed to line up pieces of merchandise until finally in disgust you will say: "Will you please let me get out of this store; I have been in here for twenty minutes saying, 'No.' I just want a little 25-cent toothbrush." And out you go, and you never come back again.

We took Sears Roebuck & Company in Cleveland, and asked them to use one sentence in selling Barbasol. A man would buy a toothbrush and the clerk would say to him: "How would you like to save six minutes' shaving every morning, sir?" Well, what can that fellow say? "No, I am not interested; I love to hang around bathrooms shaving in the morning." Nine out of ten men would turn around and look at the girl with that bewildered look on their face, that look of: "What do you mean? A new transportation system at my house; a new lawn mower for the face; or what?"

Then we had that customer's atten-

tion on Barbasol beyond everything else in the world including Barbasol's competitive products, and the girl would hold up Barbasol and say: "Just spread it on and shave it off; nothing else required." We increased sales at Sears 104% with that attention-getter and that follow-up Tested Selling Sentence.

We only had one negative reaction. We always look for negative reactions. If I would tell you gentlemen that in every box of clothes pins you would find a gold one, you would start looking for it and if you would not find a gold one you would be back the next day. It is not finding these sentences but it is finding a good sentence that will sell and not high-pressure the customer. There was only one negative reaction to that sentence.

I went up to one of the girls to see how the sentence was being used in that store and the girl said: "Mr. Wheeler, I used that sentence just a few minutes ago on a customer with just a little fuzz on his face, and in a high-pitched voice he turned around to me and said: 'Why, good gracious, dearie, it only takes me two and a quarter minutes to shave anyway,' and out the door he tripped."

Well, that gave us an idea, so by the time we got to William Taylor & Sons we changed that sentence around so as to even sell Barbasol to those fellows. They would walk in and ask for their toothbrush and the clerk would say: "How would you like to cut your shaving time in half, sir?" If it took two and a quarter

minutes to shave the fuzz off their face, or twenty minutes to shave off out-of-door whiskers, we still had a sentence to fit the occasion.

In Restaurants

Similar experiments in restaurants have been carried out. The smart waiter also has his magic words and behavior by which he soothes, guides and controls his unsuspecting guests. And this is of interest to those who eat as well as those who serve.

For instance, a man walks rapidly into a restaurant, a sign that he is in a hurry, and addresses the first wide-awake-looking waiter he sees, a sign that he knows how to get quick service. He says:

"I want three four-minute boiled eggs and I can't wait more than one minute for them."

It is a preposterous request and the waiter might be pardoned for reminding the man that it takes four minutes to boil a four-minute egg. But that is not the right answer. He should say:

"Yes, sir," followed by such a rapid walk to the kitchen that the guest feels that he is at least going to do his best. If the restaurant is a large and busy one and the waiter has luck, he may return within the minute by the guest's watch, bearing those impossible four-minute eggs and the cup of coffee he wants but didn't order.

The hurried guest appreciates magic, gives a nice tip and probably becomes a steady customer of that restaurant and that waiter when he

has leisure to eat more substantial meals.

The next time he asks for that same miracle, he may not get it. That is just the trouble with magic, the conditions have to be just right. The waiter will then have to explain how he did it before. He simply found that another waiter had three four-minute eggs cooked and ready to be taken away but they had been ordered by a nice, dopey old person who wouldn't notice an extra ten minutes delay, while three more were being cooked for him.

At all costs a waiter must keep his customers in a cheerful frame of mind; otherwise they will not order much and may go out without anything being rung up on the cash register. This often means that the guests must be protected from each other and even from themselves.

Sometimes the waiter must quiet a boisterous customer with a magic phrase. Of course he cannot tell him the truth that he is making an ass and a nuisance of himself or even hint at it. The sentence that does the trick nearly every time is this:

"It must be wonderful to feel so happy!"

The first effect of these words is that they are sweet flattery but slowly this is followed by a sour after-taste, suggesting that perhaps people think he isn't able to "hold his liquor well." He usually endeavors to disprove this by trying to appear as "sober as a judge."

Another time when a waiter should hold his tongue is when a guest comes

in to breakfast with a grouch, or suffering from a "hang-over." A number of phrases were tried out, but none of them worked, not even a simple "good morning." It may be a "rare day in June," but so far as that guest is concerned there is nothing good about it. The best thing to do is put a cup of coffee in front of him, before he has time to ask for it, and then get his order quickly and correctly, without asking him to repeat it. He should be served quickly, too, for once he has food in his mouth he can't talk, and no matter what a grouch says, it's almost sure to be a complaint.

If two guests start arguing over who is to get the check, the waiter should size them up quickly, and if one is bluffing, he should give it to the one who really wants it. In that way, both are satisfied. Sometimes a waiter sees a guest start out with somebody else's overcoat, but it would never do to intimate that this was intentional, for that might result in a scene, and maybe a damage suit. The magic phrase here is: "I believe you have the wrong coat, Sir."

If the man is honestly embarrassed, it will do no harm to tell him that a bishop did the same thing the other day.

Dishonest persons may possibly eat in restaurants but the waiter must never suggest such a possibility. If one tries to pass counterfeit money, he should say sympathetically: "Someone must have given you a bad bill."

If a woman enters a restaurant by

herself, it is a mistake for the head waiter to ask if she is alone. Perhaps her husband or sweetheart may have deserted and that word "alone" is like a slap in the face. "A single table?" may be bad in case she is an old maid because the word "single" is not good for her appetite. The right phrase is "table for one?"

In a large party, since the waiter does not know anybody's name, he usually identifies some article in each order with the orderer's personal appearance. A bald-headed man may be silently named "half-grape fruit," a lady with a long neck, "Turkey," and a thin but pretty girl, "sliced peach." It is no use asking the waiter how he has named you—he will never tell. Some waiters name only one person, and using them for a landmark number the others in rotation; but if they change places places he is all mixed up.

Another thing about which many people are sensitive is the pronunciation of words—and no one likes to be corrected, particularly by a waiter. Suppose, for instance, a guest orders chocolate mousse, and calls it "mouse" instead of "moose." By either name this dessert tastes the same, but should the waiter, knowing the proper way to say that word, deliberately mispronounce it, just to keep from embarrassing the guest?

If he does, the guest may later learn from his wife or other authority the right way to say it, and then feel the waiter was trying to make a fool out of him. In which case, he probably will not return to that restaurant—

and in these highly competitive days, a waiter's livelihood depends a good deal on his ability to get and hold steady customers. Ordinarily a waiter should repeat each item in an order, but when a word is mispronounced he should simply write it down and say nothing—and if the guest afterwards learns better, he will be happy in thinking the waiter was every bit as ignorant himself.

Sales Psychology

But, as I say, it is not a cure-all; nothing is a cure-all. I like to tell the story on one of my former associates. He was sent down south during the war to sell those \$10,000 life insurance policies to the colored soldiers. He was all filled up with the psychology of selling, and he went down there saying: "I will wow those colored fellows. I will scare them. I will make them buy my insurance policies." He got up on the soap-box and this is the way his sales talk went:

"Colored folks, you are going over to France to fight for Uncle Sam. Now, over there the Germans are going to shoot at you and blow your heads off and tear your arms apart, and you are going to be smeared all over Flanders Fields. That is going to happen to you over in France.

What is going to happen to your poor families left behind. They will have no coal, and they will be shivering in their houses, and they won't have any pork chops, or gin, or corn liquor, when you go over there and your heads are blown off.

Now, colored folks, what you have got to do to rectify that is to buy Uncle Sam's \$10,000.00 life insurance policy, paying only \$1.00 a month which will be taken out of your salary and you will never miss it.

Then when you go over to France and the Germans blow your heads off or tear your arms apart and you are smeared all over Flanders Fields, then your families will have \$10,000.00 to buy all the coal they want, all the pork chops they want, all the gin or corn liquor.

No matter where you colored folks are with your torn arms and your heads blown off, either up there playing harps or down with the devil shoveling coal, you will know you did a good job for the families you left behind."

Well, I thought that was a pretty good sales talk myself, but my associate did not sell a single insurance policy. He said: "One thing I do know, though, I scared those colored fellows." How he scared them. Their faces were white and they went over into the woods wondering what was going to happen to them over in France. *They did not care about their families at home.* It took a little colored fellow to tell us this.

He said: "Captain, you won't mind if I stand up on that soap-box and just say a couple of words to these colored folks?" He said: "You all are missing the point. Ah never makes one of those speeches in ma-

life, and Ah don't know nothing about that psychology of selling, but just you all let me go up on that there soap-box." With nothing to lose and everything to gain, my associate let that little fellow get up on the soap-box, and these were the "Tested Selling Sentences" that little colored fellow used.

He got up there and said: "Colored folks, you all are going over there to France to fight for Uncle Sam. That is all cut, dried, and settled. Now, over in France Uncle Sam has two kinds of colored boys. He has the colored boys that are in the firing line shooting at the Germans and having their heads blow off; and he has other colored boys three miles back of the trenches tending to the mules. Now, Ah ask you colored boys: Where do you suppose Uncle Sam is going to send the boys that have \$10,000.00 life insurance policies that he will have to pay out on if the boys are killed? Will he send them up in the firing lines to be shot at by the Germans, or three miles back of the lines tending to the mules?

The boys understood. They wanted to be three miles back.

Thus the little fellow sold the policies.

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Book Reviews

A READING LIST ON BUSINESS ADMINISTRATION. Third Revision, June 1, 1936. Published by the Amos Tuck School of Administration and Finance, Dartmouth College, Hanover, N. H. Price, 30¢

A carefully selected Reading List on Business Administration, prepared by the Faculty of the Amos Tuck School of Administration and Finance of Dartmouth College, in response to requests from alumni and others for advice concerning outstanding books on various phases of business, is now available for general distribution. Its 62 pages represent the most important books on business published within the last two decades, with emphasis, wherever possible, on the most recent volumes or editions.

The Reading List includes about 300 titles, 37 titles under Industrial Relations and Personnel Management each book being accompanied by a meaty and interesting annotation telling of its contents or distinctive approach. The divisions under which these books are classified include: The business system and economic policies, the administration of business, industrial relations and personnel management, marketing, foreign trade, finance, accounting, business statistics, and business law.

As was the case in previous editions, this Reading List is of service

to executives and concerns in establishing small libraries of business books, and in calling attention to the most important contributions made to the field of business theory and practice.

The section on "Industrial Relations and Personnel Management" is given under the divisions of labor problems and legislation, trade unionism and joint relations, personnel administration, industrial psychology, executive self-development, unemployment and social insurance, sources, periodicals and bibliographies.

THE LITERATURE OF BUSINESS STATISTICS. By Olin W. Blackett. Michigan Business Studies, Vol. 8, No. 1. Ann Arbor; Univ. of Michigan, 1936. Price \$1.

This bibliography by O. W. Brackett, Professor of Business Statistics, at the Bureau of Business Research of the School of Business Administration, University of Michigan, refers to and annotates the best available material dealing with statistical techniques as applied to business. The need for such a compilation grows from the fact that the field of business statistics does not, in its newness, have its own body of literature and contributions are so scattered and so variable in quality as to defy adequate consideration without much time

consuming research. This publication, which is an adaptation of material originally gathered for teaching purposes, is presented with the expectation that it will be of value and assistance to those charged with the task of using statistics in the analysis of business problems.

This list includes 370 references, (52 titles under "Personnel" including magazine references), each accompanied by a brief description of the material together with critical comments by the author regarding the scope and value of the article or book referred to. The material is grouped under the headings of Statistical Method, Market Analysis, Personnel, Finance, Production, Forecasting, Real Estate, and Population, Growth Curves, and Secular Trends.

This bibliography is not intended to be all inclusive; it is selective. Many books and articles are excluded because the statistical evidence they present is inadequate or because the statistical method is not significantly treated according to the author's judgment.

The section on "Personnel" is given under the headings of records, employment statistics, selection of employees, labor turnover, accidents, and miscellaneous.

SOLVING PERSONAL PROBLEMS. A Counseling Manual. By Harrison Sackett Elliott and Grace Loucks Elliott. Holt, New York, 1936, 321 pp. \$2.00. Reviewed by Owen E. Pence.

Professor Elliott and Dr. Grace Loucks Elliott have combined insights reached through many years of individual counseling, teaching and

study in a series of chapters which make authentic technical contributions from all schools of psychology and mental hygiene available to those concerned with the efficiency of persons as persons in the productive relations of industry as well as in ordinary relations of home, school and community. The treatment is, however, non-technical.

The authors will recognize the distinction between counseling with individuals in regard to their many problems, and the work which psychiatrists, psychoanalysts, and other professional therapists do with individuals who have severe psychological disorders, devoting an able chapter to methods of coöperation with such specialists.

In a field already much broken by specialization around age levels, for example, the authors have recognized the essential interrelation between various stages of development. Similarly, they have recognized the interrelation of personal and social problems, and of individual and group experience, even in the occupational choices and relationships.

Direct personal relation between employer and employee, once the strength of industry, have been largely lost in the size and complexity of modern industrial organization. Somewhere in the organization whether in staff or line or both, it is to be hoped, there must be those who will recognize the employee as a whole person, and his right to development as a personality. This book will be highly useful to the growing interest in the mental hygiene point of view in industry.

Employers and Employees who are
Inexperienced in Group Negotia-
tions are Largely Responsible
for Present Industrial Strife.

Reactions of Employees

NOTES ON PANEL DISCUSSION

Participants: C. S. Slocombe, T. E. Torrance,
T. North Whitehead, H. A. Wright

THE present unrest which effects large areas of American industry today can best be understood against background of conditions which have developed over the last 5 years. At the bottom of the depression workers were obliged to submit to wage cuts, long hours, and other poor working conditions, and dare not make any substantial protest for fear of losing the jobs which they had. Section 7a of the N.I.R.A. was a method proposed by the government to return to them some of the spirit of independence which they had previously held. It was hoped that this Act would appeal to them because it proposed that by their own efforts, combination, and organization, workers should be able to improve their own wages and working conditions. But the Government

failed to appreciate the fact that employees who are unskilled in working together in organizations cannot suddenly learn to do so, and that employers who are equally inexperienced in negotiating with groups of employees cannot suddenly learn to do so.

Employers widely extended the use of so called employee representation plans as providing a means of employee organization with which they thought they could most easily deal. Employees, having no experience of trade unionism and being suspicious of it, in many cases, welcomed the organization structure provided by their employers in these plans. But the setting up of such structures while it minimized, did not avoid the difficulties caused by the inexperience of both parties in conducting negotiations.

The session on what employees want attempted to throw some light upon the difficulties caused by this inexperience and some of the facts which students of the subject have found to be the habits of thought and motivations of employees. The conference did not attempt to give a list of things which employees want such as fair wages, reasonable working conditions, security etc. In the early discussions of the panel this question was raised. But such wants seemed to be so common that it was thought unnecessary to discuss them in the open forum and it was decided that the meeting should rather consider the more abstruse and hidden wants of employees.

Incentive Plan Suspected

A case was cited of a group of employees of varying age and experience working under a group incentive plan, by which the total output of the group was theoretically divided among the members of the group in accordance with the amount of work each did. On studying the matter the company found that older employees who were slowing up were not contributing as much to the work of the group as the younger men. They therefore proposed that the older men's rates should be reduced in order that the younger men's rates might be raised. This seemed to the company to be a desired modification of their group incentive plan which would appeal to the employees because each man would be paid more nearly what he was worth.

The employees through their representatives immediately protested this scheme. The company in the usual manner proceeded to prepare an elaborate set of charts and figures on output and wages to demonstrate to the employees the fairness of their proposed new wage scales. In this the company was thinking in logical terms. They had made a proposition which seemed to them to be logical, the employees had objected to it, so they proposed to add a little more logic in order that the employees might accept the plan.

But fortunately the matter was studied more thoroughly and the attitudes of the employees looked into more fully to see just why they objected to this apparently fair change. Various matters were considered such as; were older employees in the control of the representation plan? If so, did they not want their status changed even if it worked hardship on the younger members who might not be so fully represented? did the younger members in the group object to the change, even though it worked hardship on them now, because they looked forward to a time when they themselves would be older and slow up? did they want to ensure that, even though while young they might not be fully paid for their work, when they were older they would have some sense of security?

No Change in Policy

Did the employees think that the scheme really involved a change in company policy, in which the recog-

nition of the value of age and experience and long service would be lessened in value in the eyes of the company. These and other considerations led the management to throw away their charts and statistics, and talk with the employees to find what their real objection was. When they did this, they found that the employees suspected the company of changing its wage policy in the direction of adopting the idea that employees must maintain their efficiency independently of the length of time on the job.

This would mean that the company would disregard entirely those intangible factors of value of a long service employee, such as his knowledge of company policy and practices, the way in which he fits into the scheme of things, his stability, etc. Management through interviews found that this was their real objection to the proposed changes. However, employees saw the fairness of their company's position, in that it could not be expected to carry a man indefinitely whether he did his work well or not, and that there must be some relationship between wages and output.

The matter was finally adjusted by the employees withdrawing their objection, only stipulating that there should be 90 days notice of each individual change and that each change should be discussed with the employee concerned to ensure that he was given a chance to bring his output up to standard rather than have his rate reduced.

This case was quoted to illustrate

that (a) the method of dealing with employee's protests or objections to management proposals by means of logic is too elementary, (b) that there may be many reasons for employees' protests against management's proposals, and it is only sensible for management to try to find out which of the various possible reasons is the one actually motivating their employees in any given case, and deal with them on the basis of their real reasons for objecting and (c) it suggests that, if the employees are overcome by either logic or superior negotiating ability, and forced to accept a position, while the real reason for their dissatisfaction is not met, that although they may acquiesce, their dissatisfaction will remain.

Why Always Suspicion

One of the less obvious, but more simple, factors brought to light in this case is the fact that as soon as the company proposed to make a change the employees were suspicious. (This matter was not stressed by the conference.)

Why is it that that most common and recurrent reaction that shows up in employee representation negotiations in almost every company is this suspicion of management by employees. This must be routed out, if there is to be hope of allaying unrest. On discussing this matter with an executive he quoted a recent case in which he had negotiated with his employees an agreement whereby employees working on 40 hour, 5 day week, were to be allowed time and

a half for work on the 6th day and double time on the 7th day whether the 6th or 7th day came on a Saturday or Sunday or not.

The employees in the negotiations brought up every conceivable possible operating condition which they thought management might quote as an exception from this agreement. This of course was excellent negotiating practice on the part of employees for many quarrels arise simply because in agreements all the possible exceptions and conditions which arise through the emergencies of operation are often not thought of, and incorporated.

Finally the executive asked the employees why they were bringing up all these various possible emergencies, and assured them that so long as he was an officer of the company they need have no fear that the company would attempt to quote emergencies, unexpectedly large demands or other excuses to abrogate or nullify agreements in particular instances. It was a policy of the company to be fair to its employees, and not attempt to chisel them in any way. Two months after this negotiation took place the plant superintendent in one division of the company had an extra rush of orders. Minutes of the meeting covering the agreement had been sent to him. But he started to work his men on 6th and 7th days, which were not Saturdays or Sundays, and declined to pay overtime in accordance with the agreement negotiated in the head office, on the grounds that it

was an emergency not provided for in the agreement.

How to Avoid Suspicion

Such cases are only too common, and while they continue the suspicion of employees is continually being aroused, and kept alive. Employees want rather to be able to feel that when management agrees to a proposal it will be lived up to 100%.

There are two ways of minimizing the chances of such occurrences. (1) Employees should be encouraged, in negotiations, to bring up all reasonable possibilities and exceptions which might arise in actual working practice, to make sure that the coverage and understanding is as complete as possible. This would be a better practice than asking employees to depend upon the integrity and sincerity of management. (2) Conferences with employee representatives or other employee groups should be paralleled by conferences with district or divisional management officials. They should be called together after agreements, to have the terms thoroughly and completely explained to them, and to have the basic policy of management as to fairness, sincerity, etc., reiterated.

Such a practice of duplicating conferences of employee representatives with conferences of local managerial officials is rare. That fact that it is not done is evidence of the inexperience in negotiating with organized employees.

Words Have Two Meanings

The next question which was brought up was that of the interpretation of language used by employees. A speaker mentioned being at a dinner party, in which a lady was very emphatic in her wild statements about what brutes Englishmen were as husbands. The lady told of their impoliteness, lack of consideration, snobbishness, and so on. These were the words used by the lady, and might have been taken as facts regarding Englishmen. However, he happened to know that the lady was in the process of being divorced from her English husband and she was really talking about the particular gentleman with whom she had quarreled.

The obvious things of which men speak are not necessarily what they are really talking about. There was, for example, a case in which employee representatives demanded that employees have the right to elect their own foremen. One representative after another cited instances of the oppression unfairness and disregard of workers desires by foremen, in backing up the arguments for the election of foremen. Management representatives were clever enough to get employee representatives to agree that 95% of foremen did their job well and were liked by the workers, and to show them that what they were really talking about was the other 5% of inefficient foremen. The request for the right to elect foremen was then dropped.

Management, of course, having defeated the employee representatives on this point took no steps whatever to see that the 5% of foremen who were trouble causers were either educated and trained in the art of foremanship or were transferred to other work. Hence through their inability to state their case properly, employees failed to get what they wanted, namely the improvement or elimination of poor foremen. So a cause of dissatisfaction remains.

Myths and Distinctions

This reaches over into another consideration. Management assumes and acts as if employee representative really represent the body of employees. It says that if matters brought up by representatives do not represent the views of employees, plans have provisions for the recall of representatives, and that therefore they must deal with the matters which representatives bring up. While this is a sound theoretical position, and in accordance with the structure of representation plans, it really means that often management is negotiating with a myth. It is therefore necessary for management to look through propositions submitted to it, to what employees really want.

The conference next considered the point that the worker seems to desire the same privileges as his boss. This was answered by an interpretation of the present industrial situation. The rise of present large factories increases

the gap between those at the head of the organization and workers at the bench. In small organizations this gap is small. The problem then in large organizations is to develop a continuous series of levels or hierarchies, from the worker at the bench to the boss at the top, and to make sure that in this series there are no unnecessary aggravating distinctions. For example, even such a small thing as the boss's using linen towels to wipe his hands, whereas the workers are given paper towels was quoted as a species of unnecessary and aggravating social distinction.

It was agreed that levels or groupings must be continued in industrial organizations, and that there must be some distinctions between them. It is desirable, however, to see that there is not too great a jump from one level to another, and that there is sufficient mobility between levels. That is to say, there should be a sufficiency of opportunities for persons at each level to advance to the next level. In this way individuals who are particularly conscious of social distinctions have reasonable opportunities of gaining them.

No Economic Men

The next and final point considered was the tendency to distinguish be-

tween the individual and social psychology of workers. It was said that no such distinction exists.

A foreman or an executive may deal with an individual worker, praise him, treat him unfairly, promote him, or demote him. But it is not an isolated individual worker who is being so treated. It is a member of a group. The worker knows that he is a member of the group and accepts or rejects management's actions in regard to himself, always considering its effect on his status in the group. The group correspondingly watches carefully to see that the action is in conformity with their unwritten social code.

The conclusion reached by the conference from these considerations was that management should cease thinking of a worker as an individual "economic man," who is always trying to get as much as possible for as little as possible, and who sometimes gangs up with others similarly motivated. It should turn its attention to the social structures developed by employees inside the plant, and try to understand their nature. Then will management be on the way to deal with the realities of life, instead of with an accumulation of non-existent logical "economic men."

There is no Relationship Between
Labor Costs and Gross Receipts
Under a Rigid Price System
Operating at a Profitable Rate.

Labor Costs *and* Administered Prices

By CHARLES S. SLOCOMBE
Personnel Research Federation

*This is the second of a series of articles on
bases for employer-employee cooperation.*

THE need for some sort of economic and statistical advisory service exists today particularly in those industries and corporations in which prices are "administered" rather than determined by open market conditions.

The classical economic theory of a large number of small independent units competing with each other for the market, and reducing their prices to somewhere near their costs, because of the competition of their neighbors, still operates over a large part of American business and industry.

But in certain branches of industry, particularly where there are only a few large companies who can so to

speak dominate, if not fix the price, the price is said to be "administered." There need be no monopoly, nor need an administered price system be regarded as a social evil unless the administration produces harmful effects.

U. S. Steel

Let us study the operations of the U. S. Steel Corporation over the past twelve years to see how an apparently administered price system works. We assume administered prices because of a lack of close correspondence between costs of production and prices charged. Below is Table I, showing the relation between production in millions of tons, and cost and average price per ton. It will be seen that as output increases from approximately 4 mil-

TABLE I

*U. S. Steel Corporation. Cost and Prices in relation to Output,
1924-1934*

Production (millions of tons)	Cost per ton (dollars)	Price charged per ton (dollars)	Year
3.97	81.5	66.2	1932
5.86	64.6	60.0	1933
5.90	68.4	66.2	1934
6.7	66.8	64.1	1931
11.52	60.7	72.8	1924
11.62	59.2	66.0	1930
12.99	54.2	67.0	1927
13.88	56.3	69.4	1925
13.97	50.6	65.3	1928
14.29	54.1	69.2	1926
15.23	51.3	64.3	1929

The average price charged per ton however shows almost no relationship to volume or to cost of production per ton.

These facts may be seen more readily in Chart 1. In preparing this chart, prices for approximately equal quantities, (5.80 and 5.90), (11.52 and 11.62), (12.99 and 13.38) and (13.97 and 14.29) were averaged to smooth the curves.

Here is a striking ocular demonstration of administered prices. While cost of manufacture drops

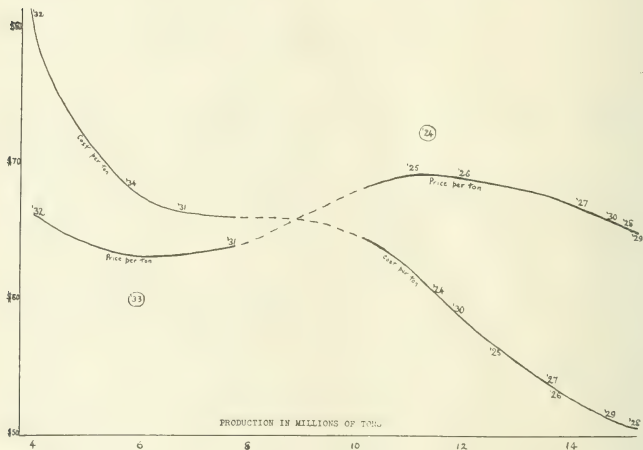


CHART 1. SHOWING THE RELATION BETWEEN COST OF MANUFACTURE PER TON AND PRICE CHARGED PER TON

lion tons to 15 million tons, the cost of production falls fairly regularly from \$81.5 per ton to \$51.3 per ton.

from \$80 to \$51, the price charged per ton changes only from \$66 to \$65.

At the left of the chart, while

production is below 9 million tons, cost per ton exceeds price charged, and operations were at a loss. This of course was during the depression period of 1931-1933.

Cost and price per ton meet in the middle at approximately \$66 when output is 9 million tons.

At the right is high and profitable production with prices declining from a high point of \$69.5 to \$65 as output increased. But the effect of this increased output was to reduce cost per ton from \$62.5 to \$51.

TABLE II

U. S. Steel. Profit per ton related to Output

Output (millions of tons)	Cost per ton (dollars)	Price per ton (dollars)	Profit per ton (dollars)
15	51	65	14
14	53	67.5	14.5
13	55.5	68.5	13
12	58.5	69.2	10.7
11	62.5	69.6	7.1

If we consider high production, of from 11 to 15 million tons, we find a profit position like this (Table II).

As output increased 27.3%, from 11 to 14 million tons, profits per ton increased 100% from \$7.1 to \$14.5 per ton. Profit per ton declined slightly when production was increased beyond this point.

The combined effect of increasing the number of tons produced at an increasing profit per ton can be seen in Chart 2.

To the left with low production, operations are at a loss. We observe how close together the two lines are, showing how the company minimized its losses.

Costs and Profits

To the right from the point where the lines cross, as production increases the cost and sales lines increasingly diverge. From the 9 million tons output point where costs and sales receipts are the same at \$600 million to an output of 15 million tons, the cost rises only \$150 million but receipts from sales increase \$380.

Again considering this from the profit position, as output rises from 11 to 15 million tons we see what happens in Table III.

TABLE III

U. S. Steel. Total Profit related to Output

Output (millions of tons)	Cost X output	Receipts X output	Total profits (millions of dollars)
15	765	975	210
14	743	945	202
13	721	890	169
12	702	830	128
11	687	766	121

While output increased 36.3%, from 11 to 15 million tons, total profits increased 73.5% from \$121 million to \$210 million.

In Chart 2 we also show labor cost in relation to output. At the lower end to the left, with low output the labor cost line runs fairly close to the sales line. But as production increases and becomes more profitable the labor cost line runs more nearly parallel in general to the total cost line, and bears little relationship to the sales line. As the point of highest production is approached, labor costs go down, while both total costs

and receipts from sales are still going up.

Thus at 4 million tons output the spread between sales and labor costs is \$130 million, at 9 million tons this

production, eventually brings depressions, so also the tendency to increase proportionate labor return in low production periods of depressions aids return to prosperity.

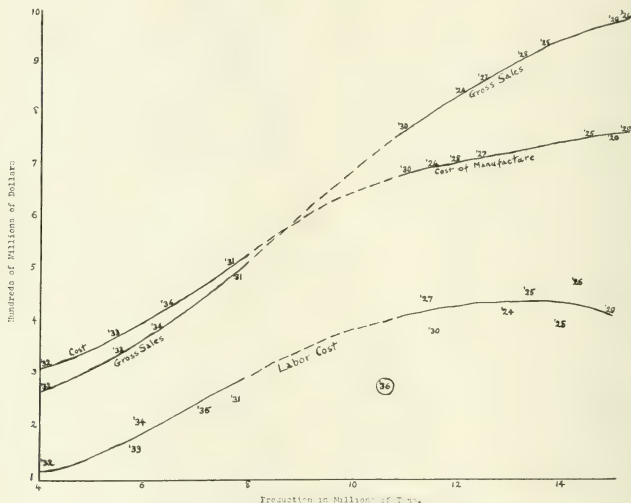


CHART 2. SHOWING THE RELATION BETWEEN RECEIPTS FROM GROSS SALES, COST OF MANUFACTURE AND LABOR COST

increases to \$250 million, and at 15 million tons it is \$560 million.

This shows the well known fact that during low production periods, as during a depression the relative return to labor increases, in proportion to sales. And just as the tendency to reduce labor return, as a proportion of gross sales, under high

Fixed Price Policy

The problem of price administration by such a corporation as Steel is then to do it, in such manner as avoids the constant swinging of its costs and prices lines up and down in inverse directions about a pivotal point.

Moulton in his conclusion from the Brookings Institution study says that prices should be reduced as a means of increasing demand, purchasing power and raising the standard of living. In these curves of administered prices, it is very difficult to see what effect the price policy of Steel has had on demand, because the policy has generally been to keep prices relatively constant, or to move them only within a comparatively narrow range.

From 1924 to 1929 prices were generally reducing slightly and demand was increasing. But were prices reducing fast enough to keep up the demand? Was there any index that the directors of the Corporation could have used to guide them in determining the best prices? Could prices have been adjusted so that they bore a suitable relationship to some index figure such as national income growth, or return to labor, or total cost of manufacture? If this had been done would demand have expanded, and a contribution made towards a balanced national economy?

The only piece of evidence we have on the relationship of demand to price is the fact that, from the worst depression year, 1932, to the next year 1933, Steel reduced its price per ton from \$66.2 to \$60. This was the greatest reduction in price from one year to the next, and was also the lowest price per ton in our period of survey. Demand jumped 1.83 million tons, the greatest increase in our period of survey. And though labor

cost per ton was almost at its lowest, being only 50 cents above similar 1929 labor costs, the total return to labor also jumped. This is hardly conclusive evidence of an elasticity of demand for steel, according to price policy, but it does give cause for thought as to the possibilities that might occur with a less rigid price policy.

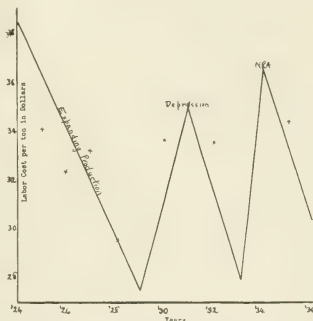


CHART 3. SHOWING VARIATIONS IN LABOR COST PER TON

Though in 1933 operations were at a loss, the reduction in price mentioned above so stimulated demand that losses were not out of line with those of other depression years. (See Chart 2.)

Costs by Years

We have discussed this question of administered prices, which bear no relation to cost of manufacture and shown charts purely in relation to output, and only incidentally have

concerned ourselves with the particular years involved.

This was because except for two years (1924 and 1933) prices remained very nearly constant.

A study of labor costs per ton by years does however show some rather interesting and informative things.

In Chart 3, we show the fluctuations in labor costs since 1924. During the period of general expanding production from 1924 to 1929, the period of advances in engineering and management methods, there was almost continuous reduction in labor cost from \$38.4 to \$27.5.

Then when the depression came, labor costs went up and remained at between \$33.5 and \$35 during the 3 years 1930-32. In 1933 labor costs were cut back to \$28, almost as low as they were in the year of great production, 1929.

In 1934 with the NRA reduction of hours, which involved some increase in hourly rates, the labor cost per ton of steel shot back up to \$36.6, almost

as high as it had been ten years before in 1924.

This however lasted only a short period. The Steel Corporation as all such companies do, proceeded to increase its technological improvements and improve its management methods, so that by the first half of 1936 it had cut back labor costs to \$30.4 per ton, with production only at an annual rate of 10 million tons.

This analysis of the past operations of the U. S. Steel Corporation shows how in the price system prevailing (a) there seems to be little relationship between costs, prices and profits, (b) no consideration appears to have been given to the problem of considering labor as both a cost item, and as a consumer factor.

We suggest that if the national economy is not to be thrown out of balance again, and if labor dissatisfaction is to be allayed, these items should be matters of research by the U. S. Steel Corporation, and similar dominating companies.

In the next issue the operations of industry as a whole will be discussed.

An Educational System Which During
the Last Twenty Years Has Supplied
Annually Hundreds of Trained Men for
Skilled and Semi-skilled Departments.

Ford Apprentice Training Courses

By FREDERICK E. SEARLE
Superintendent of Ford Schools

A LITTLE group of young men employed in a tool room, realizing that they needed a better knowledge of mathematics and drawing in their work, organized a class in 1913 which met regularly in the attic of one of their number, who acted as both host and instructor.

From this small beginning Ford Motor Company has developed an educational system during the last twenty years which annually supplies several hundred trained men for its skilled and semi-skilled departments. Young boys finishing grammar school, high school graduates, or employees ambitious to learn a trade are given their chance to train for advancement.

Three Schools in Training Program

Since 1915 *Ford Apprentice School* for developing skilled mechanics and

specialty men has been continuously operated by our company.

In October 1916 *Henry Ford Trade School* opened with six students. This school occupies Ford Motor Company property but it is in reality a private school incorporated under a Michigan statute to do business on a non-profit basis.

As graduates of this school comprise a large majority of those attending the Apprentice School, a description of its operation is in order.

Boys are enrolled between the ages of 12 and 15. At 18 or 19 they are graduated and offered jobs in Ford Motor Company.

The school is operated on the co-operative basis, the first of its kind for young students.

Seventeen hundred are now enrolled. Until the academic course is

completed, one week is spent in class work and the following two weeks in shop work. This work is segregated and three acres of floor space is set aside for its exclusive use.

During the summer each boy under eighteen is given three weeks vacation and one additional week at Christmas. This arrangement provides 14 weeks of class work, 34 weeks of shop work, and 4 weeks vacation. During all these periods the student is paid a cash scholarship which is set at 15 cents per hour when he is enrolled and is adjusted eight times a year according to his accomplishment. The maximum rate is now 60 cents.

An additional two dollars per month is given each boy for deposit in some bank as a thrift account, and a hot lunch is furnished each noon without charge. In 1935 these three items totaled one million dollars, an average of nearly \$590 per student.

School Self Supporting

To justify this expense all work done in our shop is productive. The younger boys are repairing small tools. Safety goggles—ten to fifteen thousand of them per month—can be repaired by the younger boys.

All of the precision tools of Ford Motor Company are repaired by boys who have had more experience—each month 350 pairs of micrometers, four thousand dial indicators, and other items in proportion.

The older boys are engaged in the manufacture of tools—cutters, reamers, drills, arbors, special tools, any-

thing that any good tool room might be called upon to produce.

Last year our sales to Ford Motor Company aggregated \$1,700,000 which provided, except for a few thousand dollars, sufficient income to operate the school. This was possible as no charge was made for the floor space occupied and only the depreciation on the equipment loaned to our school.

One man is given the task of routing the boys through the shop so that they may have as varied an experience as possible in many of the twenty-five departments. Boys who are adapted to tool making should have received the following machine training. Shaper 3 months, Lathe 4 months, Miller 5 months, Grinder 5 months. It is evident that boys who graduate at eighteen with this experience are well on their way to become mechanics. Some idea of the quality of their work may be gained by the fact that spoilage on fine tool work involving accurate dimensions in many cases from 0.003 inches to 0.0001 inches, and finer, has averaged less than one per cent for the last five years on an annual output in excess of one million hours.

Practical Training

The method of instruction makes it possible for a boy to enter our shop the first day and on some simple task begin immediately useful work with very little explanation.

Ordinarily fifteen boys or less are enrolled in any one day. One third of this number is assigned to class

work leaving a maximum of ten to be absorbed in the shop. Because of the great variety of work a given instructor would probably have not more than two of these to initiate.

Every day a few boys are transferred to other tasks. This rotation of occupation is in the hands of a single man who devotes all his time to the task. This man is a mechanic, not merely a clerk, and therefore better able to determine when the boy should be given new work.

After a student has become accustomed to shop routine, two conditions make entering a new department less difficult. Boys who are keen observers absorb much from their daily contacts with neighboring departments, and during the class week one hour each day is spent in Shop Theory where shop methods and problems are discussed.

Ingrained in human nature is a desire to do and to discover and within limits of safety this desire is fostered in our shop.

The first emphasis is put upon safety. When entering each department a boy is given a short talk on safety and printed instructions on safe practices in that type of work. Order and neatness are also stressed, and accuracy.

The element of time comes next for that must be considered early in the training process to be most effective. Some boys have ideas which are in part original. Encouragement is given them.

Academic training is closely correlated with the shop work; Mathe-

matics through plane geometry, Shop Theory, Mechanical Drawing, English, Physics, General Chemistry, Qualitative and Quantitative Analysis, Metallography, Civics, Economics, and Geography. Students who have completed this course and wish to graduate from high school or enter college must supplement the work with courses in at least three subjects for one year. Many who have entered college under these conditions have successfully competed with students who have finished college preparatory courses.

Ford Training School

In June 1935 Ford Motor Company opened *Ford Training School* for 200 high school graduates between 18 and 20 years of age. The primary object is to give boys who wish industrial work an opportunity for a brief training before being transferred to a permanent location.

These students receive \$22 per week and are given experience on typical tool room work suited to their ability.

The arrangement provides an opportunity to enroll 800 recent graduates of high schools annually. They are absorbed by the Ford Motor Company in almost every department of its activities.

Those who show ability to do such work may be placed in our tool rooms as apprentices when there are openings.

From these two schools come most of the additions to *Ford Apprentice School*.

Class Room Training

All apprentices must attend the class work provided by the school.

Any Ford employee may attend classes for which he is prepared but only apprentices receive the shop instruction.

Classes are held at 8:00 each morning, and at 1:40 and 4:00 each afternoon. This makes it convenient for employees to attend classes without losing any shop time or making an extra trip to the plant. There is no charge for these classes nor are the students paid while attending them.

Apprentices in our tool and die rooms, electrical department, heat treat department, and power house now number 1600. An additional fifteen hundred non-apprentices are also attending our classes hoping for advancement.

The plan used in the class and shop training requires a comparatively small number of instructors for the class work and shop instruction.

Twenty men are needed for teaching the academic subjects and keeping the records, and seven men devote their time to shop instruction and supervision.

Not only are these seven men who have direct charge of the shop training of apprentices skilled mechanics but the class room instructors are also capable of holding positions of responsibility in our shops. During the summer vacation these men work in our shops so that they may more accurately keep pace with the rapid

changes and advances in manufacturing processes and precision work.

Tool and die apprentices report for one period in drawing and one in mathematics each week until the prescribed course is finished. This ordinarily requires three years in each subject.

The following method has proved quite satisfactory. Seven lessons are given in mathematics. The instructor spends the class period in demonstration, solving problems on the blackboard, and in answering questions. This demonstration work is aided by charts prepared during the summer vacation.

Examinations

The week for the eighth lesson is devoted to written examinations in all subjects. If the student has a passing grade of 70 he enters the second series of seven lessons. If he fails it is necessary to repeat only the seven lessons. The plan has prevented many students from becoming discouraged.

At the end of each class period home work is assigned. A report must be made on this work at the next class period.

Because of the close correlation with the shop there is never a necessity of explaining to the apprentice the reason for the required class work. Almost from the first lesson there is an immediate application of some principle.

One of the early lessons in Mechanical Drawing requires the student

to reproduce in molding clay the solid represented by the three surface drawings. The cutting is done with a tool made by substituting a wire for the saw in a small scroll saw frame. This practice helps to make reading of blue prints rapid and accurate.

Our class work in Electricity deals not only with the theoretical but much laboratory work is given. With the help of an adequate switch-board one side of which is wired for alternating currents adjustable up to 4000 volts and the other side for direct current from 230 volts down we can duplicate many of the problems which arise in our company for which moderate voltages are used.

For apprentices in our various laboratories and heat treat departments the class work in Metallography also gives much work of a practical nature. Many of the problems arising in the factory that require a microscopic examination are referred to this department for solution. The student is therefore challenged by the fact that polishing of samples, etching them, and preparing them for the microscope is purposeful and plays its part in producing more nearly perfect material.

Shop Instructor and Apprentice

Shop instructors have full control of the apprentice during his training period.

The instructor assigns the student to his first task, sees that he has work to give him progressive training, transfers him to other types of work,

keeps a record of his work in both class and shop, and recommends him for pay increases according to his progress.

In our training program the shop instructor is the key man. He is in daily contact with each student and these contacts are usually with the individual alone. He comes to know him more intimately than a class instructor who meets him only once or twice each week possibly can.

The first day a new apprentice reports to a tool or die room he is interviewed by the shop instructor. Whether he is a graduate of Henry Ford Trade School or Ford Training School, or comes with no previous experience he is given oral and printed instructions on safe practices in the work to be assigned him.

He is then taken to the department in which he is to work. The foreman of that department is called a leader, who selects the work for each of the twenty or twenty-five men who work under his direction. Several of these men may be apprentices at various stages in their training.

The shop instructor shows the apprentice as much as may be necessary about the machine he is to operate. If the student is not familiar with the machine he sets up the job, sharpens and adjusts the tool and makes the first cut, which in the case of the lathe may be a facing operation. The machine is then turned over to the student who makes a cut with as little help from the instructor as possible. Beginning with his first

job every completed piece must be checked by the department inspector for size and finish.

For whatever time may be necessary the instructor remains with the student until he has mastered the operation and he continues that same type of work until another job has been assigned by the instructor. If any questions arise during the instructor's absence the leader or a nearby workman gives the required assistance but all initial explanations or those involving considerable time are made by the shop instructor.

Machines in Course

While we consider the natural order of training in a tool room to be shaper, lathe, miller, grinder, and bench there is no fixed rule of sequence. We prefer to start a student with shaper or lathe experience. Sometimes it happens that the machine for which a student is ready is not available in which case another is substituted, but before the shop training is considered complete he should have had a minimum of six months on the shaper, eight months on the lathe, nine months on the mill, eight months on the grinder, and nine months on the bench. Even this schedule is subject to considerable variation depending on the skill of the student. In any case the shop instructor is primarily the one to determine what part of the training may be shortened and what extended.

The regular work coming to the department will ordinarily in the course of six months furnish a suffi-

cient variety to give the student an experience which would warrant considering his training finished in that department.

Of course the school and apprentice both realize that further experience on the lathe would probably result in a greater skill and greater dexterity and that it would be desirable before the individual could be considered a lathe specialist.

Upon completion of the training period on one machine to the satisfaction of the shop instructor and shop leader, the shop instructor requests an increase of five cents per hour in the pay rate of the apprentice, who until this time has been receiving the Ford minimum rate of 75 cents per hour. This request is presented to the Director of the Apprentice School who approves it providing the student has maintained a satisfactory record in both his mathematics and drawing. When this has been properly endorsed by him and the school Superintendent the form is forwarded to the pay roll department of the factory where the new rate is made effective.

Records Kept

On the day an apprentice is placed in a department the shop instructor makes a note of the date and sends the information to the Director of the Apprentice School who fills out a form card which is so dated that it will rotate in the file and come to the top on the date when the student should be ready for transfer. If on account of sickness or for any other

reason the transfer should be delayed the notation is made and the card set for the new date.

This double check makes it very unlikely that a student can be overlooked at transfer time. The final decision for transfer rests with the shop instructor and not the shop leader, whose personal interest would be better served by delaying the transfer.

For the other standard machines found in the tool room; shaper, mill, and grinder, the same routine is followed and increases are given at intervals of not less than six months to a maximum of 95 cents per hour on completion of the course.

Certain special machines such as Lucas boring mills and Csip mills are few in number in any tool room and only a few of the more skilfull apprentices have an opportunity to operate these machines.

When the student has completed his course he is given a card stating what experience he has had which entitles him to be considered a journeyman. From this time he is placed where he is considered to be most valuable to the company.

Construction and Maintenance

Electrical apprentices are treated in a different manner as in most cases the electrician must go to his job, while the job usually comes to the tool maker.

An electrical journeyman takes an apprentice with him. However, these assignments are made by the

shop instructor, who visits all apprentices at frequent intervals. The journeyman explains to the student the nature of the job confronting him and calls on him for such assistance as he can safely render.

Much care is taken by the journeyman and the shop instructor to explain the safe methods of handling installation and maintenance work.

As the shop instructor visits the apprentice on the job he encourages him to talk about his work, and to ask questions, which are answered as completely as his previous training will permit.

By the time the apprentice has completed his theoretical work which he receives twice a week over a three year period he is able to understand most of the problems that he encounters in the work of manufacture, installation, and maintenance.

No apprentice is kept long with one journeyman. The shop instructor changes him frequently for the purpose of broadening his viewpoint and giving him a chance to observe the different technique of journeymen. It serves as an incentive to make an improvement in his own methods.

There is also a reaction on the journeyman who is acting as a teacher as the surest way to master any subject whether it be purely academic or a mechanical skill is to teach it to another. In this way the presence of apprentices serves as a tonic to any department.

Many a journeyman has also been

spurred to new effort by observing apprentices not only approaching his skill but surpassing it by the introduction of new methods.

No tool room or other shop department that has a considerable number of apprentices who are welcome in that department can stand still. Apprentices return their cost in an immediate step up of the department in which they are placed.

Check a tool room in which there are apprentices who have completed their mathematics and drawing and you will find journeymen taking new problems to them for solution.

While the shop instructor is the key man, in a smaller institution he might well be the only man required to train a limited number of apprentices, as he could undertake the class work as well as the shop supervision.

Textbook Material

From the beginning of our training program suitable text material was hard to find, and special lesson sheets were compiled by our instructors. At first these were few and without much sequence. With the growth of classes, better organized courses became necessary.

The original plan was to distribute mimeographed sheets during the class period. With the accumulation of material and because of many requests for copies for use in other schools it became necessary to bind them in book form. They now contain the teaching material used in our mathematics, drawing, electricity, metallography, and science departments.

Their preparation has brought the theory of class closer to the facts of the shop for both student and instructor.

Five Years Ago a Young Man Was Near Dismissal Because of Bad Habits. But He Was Retrained and His Nervous Health Improved. He Has Been Promoted Five Times and Received Six Increases in Pay.

Nervous Health *in* Industry

By LYDIA G. GIBERSON, M.D.
Metropolitan Life Insurance Co.

AT THE outset I would like to explain that I am not appearing as a special pleader for the cause or place of the psychiatrist in the industrial group. I prefer to present to you, ladies and gentlemen, the facts as briefly as I can and let your intelligence draw from them any conclusions beneficial or constructive to personnel officials.

In the first place I am a physician. It is well to bear in mind, in anything I may say subsequently, that my approach to personnel problems is primarily a medical one. The degree of my success or that of any other psychiatrist is an ability to make an honest medical training serve the needs of mental hygiene in industry.

There is no mystery to the job of

psychiatry. There is nothing of long medical terminology designed to impress. It is simply a humanitarian, common sense attack of a known problem with a time honored prerogative of the doctor thrown in to bolster confidence on the part of the harassed employee. For these prerogatives are important as they provide the employee with a company sanctuary, a spot where individuals may come to pour out their heartaches and discuss their problems. They realize these confidences will go no farther, but because of the close association of the psychiatrist and the personnel department, adjustments may be made and troubles smoothed over.

Let me illustrate the work of an industrial psychiatrist by a case.

Example of Rehabilitation

A chap of 27 with a highly intelligent face bearing signs of dissipation referred from the Medical service because of a recent alcoholic spree which numbered the fifth of a series and which should mean exit from the company. A most amazing history of a twisted childhood due to the elopement of a girl of social position and wealth with a railway brakeman. As a child he was battered from pillar to post, one time almost destitute, the next the pampered maternal grandchild. Each parent had extra marital attachments. The patient had many positions. He became enamoured with a girl whose hold was so great over him that he would throw up any job and follow her to the ends of the world. Suddenly after five years of living in a false heaven, the girl broke off all contact with him. His social, emotional and financial status was at a standstill when he obtained a position with this Company. After a few months he suddenly and unexpectedly ran into this girl with whom he had always been so much and so hopelessly in love. His world tottered and he decided a good spree would suffice, so each time his fits of depression overtook him he sought oblivion through alcohol with resulting gastrointestinal upsets, etc., and greater depression, which soon became a vicious circle. The situation seemed difficult but not hopeless. The chap was intelligent and he could be given insight as to why he acted as he did. A conference was held with a personnel officer and rather reluctantly it was decided to give this chap one more chance, letting the

responsibility of success or failure be laid squarely at the psychiatrist's door. Patient hours were spent with this chap. At times it was difficult to know who was more discouraged, the patient or the psychiatrist but we fought on.

That was nearly five years ago. The chap, since then, has had five promotion with six increases in salary. He is a completely rehabilitated individual who is doing a grand job for the Company.

Voluntary Patients

Because of the recognition of such facts as these, the Metropolitan Life Insurance Company, in 1922, placed a full time psychiatrist on their staff. Since that time three thousand, six hundred new cases have been seen and approximately fifty thousand interviews granted. In 1935, out of fifteen thousand employees, two hundred and five new patients were examined, seventy-nine of whom were men and one hundred and twenty-six of whom were women. In this company the ratio of men to women is one to two. During the same year there were three thousand, seven hundred and eighty-nine interviews, independent of the two hundred and five new cases. These interviews cover re-examination of patients, discussion with other physicians regarding the cases, psychotherapy conferences and interviews with supervisors regarding their employees. Each year it is gratifying to see the increase of voluntary patients and the response of supervisors who come unsolicited to the psychiatrist to discuss the problems of their people and to ask help

in trying to maintain emotional stability in industry.

Preclinical Symptoms

Organic neurological conditions and the frank psychoses do not occur like a "bolt from the blue" as is often believed. They are insidious in onset requiring a trained eye to early detect. Pre-clinical symptoms early picked up may save industry much embarrassment and loss in dollars and cents. Consider for a moment the tremendous responsibility of those in charge of public conveyances of all types. The trained neuro-psychiatrist early sees the fixed pupil of the incipient tabetic. If such an individual is left on duty until his lack of co-ordination and muscular control is noticeable to the personnel man, it is often too late. The engineer of a locomotive complains of a lessening of the grip of the right hand. He may speak of it lightly as a sign of approaching age. To the neuro-psychiatrist this is the warning signal of a probable slow leak of the arteries of the brain. If this warning signal is heeded and investigated, the tragedy of a "stroke" at the wheel of his engine is avoided. Imagine an elevator operator or a driver of a truck with epilepsy. How much more profitable to make the diagnosis before the elevator car falls or the truck crashes.

In one of our cases a boy of 20 was referred by his section head for a sudden falling off of work output and loss of interest in his job. There seemed to be no explanation for this condition and

dismissal was considered. An appointment was given for the following day. The next morning the patient's family telephoned and stated that the boy had disappeared from home, had not been home at all the previous night. Five days later he was picked up fifteen hundred miles away. Little explanation of his behavior could be obtained. The consensus of opinion seemed to be that the boy was running away from something unpleasant that he had so far successfully kept hidden from his family and the office. After two interviews in the psychiatric department, experience taught that there was probably an underlying organic cause which could best be studied in a sanatorium. The boy was admitted to a private sanatorium and found to be an epileptic. His strange behavior was readily explained. His job which took him up ladders was changed and possibility of accidents lessened.

Company Loss

Again picture for a moment, an official of an investment company with early paresis. It is noted in his company that this individual seems a little different in his viewpoint, is a bit irritable, does not seem as logical as he previously did, but too often the true state of affairs is not found out until the company has suffered a severe loss through the individual's poor judgment or lack of judgment in granting a large loan to a very poor risk.

In the mental breakdown group, a paranoid supervisor, local manager or field superintendent, suffering with a Napoleon complex may subject many

employees to a browbeating almost unbearable, if this man's early condition is not recognized.

It is chiefly among the large group of psychoneurotics that absenteeism, and lessened efficiency with lowered production is found.

Overcompensated Fear

There is no blinking at the fact that rational outlook, freedom from the myriad besetting worries of this vale of tears, or in other words, some approach to that Utopian emotional norm—complete content—makes for greater production. Psychoneurotics are emotionally immature individuals. Many of them translate their disappointments and difficulties into physical symptoms in much the same manner as little Johnny develops a severe stomach ache on the morning that a difficult arithmetic examination is in progress.

The need of proper diagnosis and treatment of such cases is shown in the following case.

A girl of 24 years, referred by Personnel because of her very bad attendance record which was said to be due to medical causes. A very large, ungainly girl arrived with a severely mannish haircut and a mannish mode of dressing. She appeared surly, irresponsible, almost insolent in manner. This was so pronounced that one immediately recognized a cover-up. After much effort the following history was obtained.

A divorce of parents in very early life, with the patient being pushed from paternal relatives to maternal relatives,

from boarding schools to convents. Never did the child have a feeling of home security. She was petrified of life. For three years in this company's employ she had been in the section of a very fine woman manager but not an understanding one. Because of her distinctive haircut and dress she was conspicuous and everything she did was wrong. Her insolent outward appearance, covering a frightened and bewildered girl, was accepted at face value. The girl's belief that men were more acceptable in business caused her to adopt the mannish mode of dressing. After a conference with Personnel, the girl was transferred to another section. The new manager was given some insight into the picture. Now after six months, a radiant, entirely different girl is the result. No more lost time, improved work, with increased interest in the task.

To peer behind the scenes into sex troubles, financial embarrassment, domestic clashes and the dozen of other factors which make for emotional upset and consequent loss of efficiency could not, in all fairness, be placed in the province of the personnel worker whose job, heaven knows, is saddled with enough burdens as it is. But that this work should be done in a company is evident from the following curious case.

A girl of 20 years, referred by her section head, because of a "fear of immediate death." The girl denied any trouble at the office or at home. Could get little information at the first interview. The following day the girl came back voluntarily saying she would like to

discuss her problem since she felt the information would not be given to the personnel division. The girl lived with her grandmother who was most irritable and unreasonable. She made the girl's life most unhappy. The patient admitted that she often wished her grandmother dead which was the psychological explanation of her own fear of immediate death. The whole problem was discussed with the girl. Different living arrangements were made through the father and the girl continued at her job. That was several months ago. She has a satisfactory work report now and has had no return of her fears and no loss of time from work.

The reverse side of the picture shows many employees who cry without apparent reason and become irritable and difficult to handle. On superficial appearance the underlying cause is emotional yet with a thorough study of the case, definite physical factors are found, such as anemia, very early tuberculosis, etc.

Psychiatry Helps Personnel

We also find another set of individuals who should be of prime interest to personnel workers. Interesting, because numerically they run higher than other classifications. They are the people we call mal-adjusted. That term, mal-adjustment, demands a little interpretation since it covers a multitude of sins. Mal-adjustment

covers the wide range of emotional disturbances caused by any mental irritant, be it that of private or working existence. Any lack of acceptance or adjustment to the many adverse circumstances previously alluded to can be broadly termed mal-adjustment. Since it is the most subtle of the barriers to efficiency it must be carefully considered in employee relations, particularly in those supposedly mal-adjusted to routine jobs. It is entirely conceivable and demonstrable that a potentially efficient person may be wasted in an improper job. In the ironing out of these phases, a psychiatrist may help materially. One finds some employees who do not adjust despite help given them but tend to show personality traits not conducive to efficient work. Among many of the old employees there is no hesitancy in airing their real or imaginary grievances of changes in the organization. Many become trouble makers and sooner or later need to be studied psychiatrically.

To you, ladies and gentlemen, whose first problem is production, with a minimum of labor turnover, a maximum of organization efficiency, I ask you to remember that human beings remain human beings and that the measure of their production is, in the main, the result of their mental contentment and security.

Personnel Work Today Cannot be
Performed by an Untrained Person
with a Kind Heart and a Glad Hand.
It Requires a Professional Training.

Training for Personnel Work

By HARRY D. KITSON

Teachers College, Columbia University

I THINK we would all agree that personnel work has attained the status of a distinct profession comparable with medicine, law, dentistry etc. On what grounds can we make this claim? Let us review briefly the earmarks of a profession.

First, to be classed a profession, a field of work must be represented by a body of practitioners who are held together by a craft consciousness as expressed in formal professional organizations. If any doubt existed regarding the presence of such a psychic bond among personnel workers it was dispelled by the organization of the Personnel Research Federation in 1921. Its statement of purpose as that of "the scientific study of man in relation to his occupations and his education therefor, and the diffusion of knowledge concerning this rela-

tion," explicitly recognizes personnel work as a profession.

A second criterion of a profession is the presence of high standards of proficiency. That is, a professional man insists on doing his work superlatively well. When I observe the majority of personnel officers I see that they qualify in this respect.

A third requirement is a strict code of ethics. A professional man permits nothing to stand in the way of the service which he is bound to render. He sacrifices personal wishes and political expediency to the welfare of those whom he serves. In this respect, too, the high-minded members of the personnel clan qualify as professional workers. Their aim is the betterment of the lot of workers and they regard all other considerations as subordinate.

Finally—and now we come to the topic assigned to me—a profession exacts from its practitioners an extended and specialized training. What kind of training should the personnel executive receive?

Industrial Personnel Work

I assume that in the treatment of this topic I am expected only to lead your thinking concerning this problem. I also assume that we are expected to consider only the specialist in industrial personnel, leaving out of account personnel workers in colleges, universities and government agencies. Further I assume that we are not concerned with certain specialized experts who often work in personnel offices, such as nurses, directors of recreation, directors of education etc. In other words with your permission I shall speak only of the training to be offered to the "pure" personnel officer *per se*.

Two further limitations: we shall omit discussion of the personal qualities that should characterize a personnel officer, taking for granted that he possesses the mental, social and spiritual attributes generally agreed to be necessary. Neither shall we include in our discussion the type of business experience he should have before assuming the rôle of personnel executive.

Finally I am going to beg the pedagogue's prerogative of speaking didactically and in terms of academic courses.

I suppose that in claiming professional status for personnel executives

we should be able to point to professional schools organized specifically for giving training in personnel work, comparable with schools of medicine, law and dentistry. Regrettably there are none. We can truthfully assert however, that training in personnel work is a legitimate function of a university. And we can find a number of universities which offer elements of a training program. There is no universally adopted pattern for this training. It is variously offered in Schools of Engineering, Schools of Business, Schools of Education, and in separate bureaus attached to universities, such as the Bureau of Retail Training at New York University and the University of Pittsburgh.

May we agree on the preliminary premise that this training should be on the graduate level; that the trainee should already possess a broad cultural education equivalent to graduation from a college of liberal arts. On this foundation, what kind of structure shall we rear?

In thinking of the personnel curriculum I group its contents under three headings; Understandings, Techniques and Practice.

Understandings

Under this heading are a number of areas each of which demands one or more courses:

Problems of personnel administration. This should be a survey of the important problems faced by personnel officers.

Business management and business organization. Surely the personnel officer

should know what are the problems faced by non-personnel executives in business, so that he can perform his tasks with a sympathetic understanding of the problems which other executives are facing.

Labor problems. Under some such term the prospective personnel officer should study the problems which workers, organized and unorganized, have faced during the transition into a highly industrialized society.

Social legislation constitutes another field with which the personnel officer needs acquaintance.

Psychology. A large area of understanding is covered by this term. It is expected that the personnel officer would have had an introduction to psychology in his undergraduate studies, but for specific professional work in personnel he should study this science further. Not, I hasten to remark, along lines usually pursued by academicians, who utilize categories of theoretical psychology such as memory, imagination, emotion etc. Rather the personnel officer should study psychology in terms of categories such as the mental derangements afflicting workers, the discovery of differences among applicants for jobs, the development of incentives in industrial situations etc.

Techniques

Let us now examine the techniques which should be incorporated in the training program. There is the technique of testing—intelligence, trade, interest and personality traits. While in actual practice this testing should be done by a professional psychologist who may or may not be

trained in other aspects of personnel work, the personnel officer should have more than an elementary understanding of the techniques involved.

Again there are clear-cut techniques of job-analysis which the personnel officer should master. Likewise techniques of interviewing, keeping records and making rating scales. Some persons might recommend training in the techniques of working with employee-groups. We should certainly include training in personnel research and in that indispensable tool of research, statistics.

Practice

The courses which I have mentioned must necessarily be theoretical. They should be supplemented by another form of preparation which we may call practice. Most professional preparations embody a practice-period when the individual applies his theoretical knowledge by serving an internship—a term of apprenticeship when he works under the supervision of persons who have already mastered the techniques. Such a feature should surely be included in our personnel curriculum. This suggests that training for personnel work should be regarded as a coöperative undertaking involving the joint efforts of university faculties and experienced personnel executives. Its feasibility has been amply demonstrated in the training program conducted by the department of Guidance and Personnel at Teachers College, Columbia University. We maintain very happy relations with

many business and industrial establishments which permit our students to apply their theoretical knowledge in practical situations.

Professional Status

In making these recommendations I have proceeded in an empirical manner, suggesting courses which seem to be dictated by best practice and opinion. We should recognize however, that a professional curriculum should not be ultimately based on opinion. It should be derived from extended research into the tasks that the worker has to perform. It is hoped that such research will ultimately be made. Until then we are obliged to proceed by the rule-of-thumb method I have employed.

Some of my listeners may question my assumption that the training of personnel officers must be carried on in universities. They may say "I learned on the job, and that method is good enough for anybody." But the fact that many of the pioneer personnel workers entered the field without specific training does not imply that the oncoming generation should learn by rule-of-thumb. The history of every professional field shows that in its formative period its practitioners learned through apprenticeship but

as it developed in complexity and erudition, it crystallized itself in systematic courses pursued under academic auspices. It is not likely that personnel work will be an exception to the rule.

Perhaps, also, you may charge me with holding too high standards of preparation. The ideal course-sequence I have outlined is equivalent to two years of graduate work. Here I am really paying a compliment to the profession of personnel. Rather than placing it on the level of office-boy or general clerical work, to be performed by anyone with a kind heart and a glad hand, I am elevating it to the status of a profession. Further, I am classing it with the humanitarian callings such as medicine; social service and education, which society deems most vital to its well-being and of which society exacts rigid standards. The state demands evidence of proficiency from plumbers, barbers, beauty-culturists and chiropodists. But no standards exist for personnel officers, whose work affects so vitally the welfare of human beings. The best way to invest our profession with the dignity and prestige which it should command is to insist on rigid standards and a thorough professional training.

New and Revised Tests for Assembly Work, Bench Work Dexterity, Mechanical Intelligence, Mental Alertness, Have Been Developed during the Past Year.

Testing *for* Aptitudes

EXTRACTS FROM PRESENTATION

By WALTER V. BINGHAM

Author, "Aptitudes and Aptitude Testing"

AT A time when employment is increasing, there is good reason why all who employ workers should scrutinize anew their ways of making choice among applicants. To distribute the various openings discriminatingly to those candidates who show the most promise, is obviously in the general interest as well as in the interest of employers and workers. And so this conference on Job Tests has met to take account of stock.

Those representatives of the Psychological Corporation and the Personnel Research Federation who arranged this session, had, I am sure, no wish to limit its scope when they chose the succinct title, "Job Tests." For present purposes a job is any sort

of employment, whether the work to be done is heavy manual labor, bench work, office work, supervision, selling, teaching, research, or management.

Nor are we expected to follow common usage by restricting the term "Job Tests" to those tests designed to sample the applicant's skill or proficiency in doing today the tasks of a specific job. Few jobs are static. They change somewhat from month to month if not from hour to hour. An employer wants to estimate not only the candidate's present proficiency but also his versatility. His capacity for learning greater skill on the specific job is in question; also his promise of future growth and advancement to more responsible posts.

Our topic then includes tests of ability to learn added knowledge and skills, to exhibit good judgment and intelligence in dealing with problems social or mechanical, mathematical or verbal, concrete or abstract. We are not limited to those trade tests or proficiency tests which help to answer the question as to a candidate's competence at the moment.

Traits and Interests

Measures of vocational interests also appropriately come within the scope of this symposium. From the standpoint of employer as well as of worker, fitness for a job includes capacity to acquire a liking for it, to find satisfaction in it. This is said not because interests may furnish clues to abilities. The relation between occupational interests and abilities is not very close. But interests deserve consideration in their own right. Employers know how much better is the spirit throughout their organizations when every supervisor and employee is engaged in doing work he likes to do. And as for the individual himself, the degree of satisfaction he finds in his daily occupation is no less important than a difference in wage.

America has been prone to over-emphasize the values of productivity, efficiency, competence. These values should not be allowed to obscure those personal values of enjoyment occurring only to the man who likes his work. If an applicant lacks capacity to achieve a genuine interest in the job so that its pursuit yields

inward satisfactions, the sheer capacity to acquire the requisite proficiency is but a cold and steely asset. Tests to measure vocational interests therefore need not be excluded from today's discussion.

We might even, with some hesitation, go one step farther. Measures of traits of character and personality likewise logically come into consideration. My personal preference, however, would be to pass over in silence these vast areas, because research has as yet provided employers with personality tests of only uncertain dependability. To be sure, some instruments like the word-association tests have long given promise of usefulness in differentiating individuals with marked aptitude for selling, for research, or for executive work. Other uses for the A-S Reaction Study, the Kent-Rosanoff, the Bernreuter, and similar personality tests are proposed on every hand. The traits they aim to measure are highly significant.

But until more progress has been made in fundamental investigations and in practical tryouts, is it not the part of wisdom for employers and placement officers not to rely heavily on personality tests but to concentrate on improving their techniques of interviewing, of personal observation, and of ascertaining from the records of behavior and accomplishment on previous jobs and in school the most reliable indications they can secure regarding a candidate's personality and character? If a personality test is included in an employ-

ment battery, let it be for research purposes. For the present, exceptional scores should properly be construed as indicating a need for careful check-up by other means than tests.

To adopt this attitude toward tests of personality does not prevent anyone from maintaining a similarly conservative position with regard to the place and use of tests for measuring a good many other kinds of traits, including some for which widely heralded tests of known reliability are available. An employment officer may find reason for questioning whether the traits measured are really as vitally important for success on a particular job as they appear to be; or he may question whether an applicant who lacks them may not be able to compensate for his deficiencies by superior excellence in traits not measured. He will, of course, take into the reckoning not only the records supplied by psychological examinations, but all the information available, from whatever source.

It is no disparagement of tests to recognize that in many an employment situation their best usefulness is, not to give the final answer, but rather to raise now and then a warning signal which draws attention to the advisability of further check-up before final hiring or placement.

I cannot forbear stating at the outset of the conference, in the presence of any here who may be novices in employment testing, a few of these well recognized principles. Most of you with experience in this work will readily agree with the principles I

have just stressed. You will also agree that the best estimates of what an applicant can probably do in the future are based on a careful scrutiny of what he can do now, and of what he has done. When available information as to his past accomplishments is incomplete, hazy, or irrelevant, his performance in appropriate job tests, that is, in standardized tasks, provides a sampling of what he is able to do now, and of his ways of dealing with such tasks. These specimens of his behavior, measured and expressed as linear scores, are only samples which may or may not be dependably representative of his best performance.

Errors in Estimates

A sampling error—be it large or small—is inherent in the very nature of all testing. This makes it necessary for every user of test data to keep in mind for each test used, its Standard Error of Measurement, or some similar figure which expresses the width of the zone of approximation on either side of an obtained score, within which the person's true score in the ability measured by the test probably lies. In other words, it is essential not only to know the coefficients of reliability of the tests used, but also to appreciate what these statistical figures mean at the time when the significance of individual scores is being appraised. The reliabilities of competing tests are always taken into account when one of them is being chosen for a specific purpose. It is no less important to reckon with

reliabilities or Standard Errors of Measurement when the scores made by two applicants are being compared.

Also, the question has to be raised as to the validity of the test—not its validity in general, for there is no such thing, but its validity in the specific situation. To what extent does it measure abilities or other traits essential to job performance and progress? How closely do scores correlate with measures of subsequent success in this line of work? How large must be the deviation of an individual's score from the general population average or from the average of his own group, in order that his relative superiority or inferiority in the test may have significance as an indicator of probable success or failure if he is employed? Are the available norms and the validity data such that the individual's chances of success may be computed? These are some of the questions which keep recurring whenever employment tests and the measures they yield are put to use.

Hiring as an Art

The mathematical probabilities can be computed by a well-trained statistical clerk. But a clerical computer, no matter how proficient, cannot relieve the psychological examiner, the interviewer, and the employment executive of responsibility for weighing not only the chances as computed from test data, but also the probabilities as inferred from all the available facts considered in combination. To be sure, tests are sometimes used

merely as an economical device for sifting out from a large number of applicants a few for serious consideration. But when the scores also enter into the process of final selection, they do so as components, supplements or correctives of an overall judgment, a judgment that is most likely to be right when it is made by an employment officer who understands the job and the personalities involved, and who knows the significance in *his organization*, not only of the test scores, but of facts regarding age, schooling, physique, racial stock, intelligence, personality traits, character, and previous experience as brought to light by the interviewer. Hiring and placement is an art, an art which scientific method supplements but does not replace.

The theory of aptitude implies that a person's potentialities are fairly stable. If he gives clear evidence today of ability to learn to play the flute and of inability to learn accountancy, we should be amazed to find tomorrow that his aptitudes in these directions were reversed. Human nature is never as unstable as that. To be sure, we know that a person will not in all respects be exactly the same tomorrow as he is today; and five years hence he may quite conceivably have developed or retrograded in ways at present impossible to anticipate. Favorable opportunities may encourage the ripening of latent talents now unsuspected, while other aptitudes may lapse through lack of timely exercise. What at that time he will be able to learn to do is a func-

tion of his present capacities and purposes, and also of the experiences in store for him.

A theory of aptitude must not assume that each of the factors determining a person's aptitudes is constant in the sense that it will not alter, more or less, with time. We must, however, assume—if the concept of educational and vocational aptitudes is to have any meaning at all—that the changes which undoubtedly do take place in the relative potency of these factors are rarely sudden, and that they occur within limits which can often be ascertained in advance.

Interpreting Test Scores

When thinking about a person's ability as expressed by a single score on a particular test, his examiner notes not only the point where the obtained score is located on a scale or in a table of norms. He thinks of a *zone*, a band or penumbra of values about the point which the person's true score probably lies. No examination, no test, no instrument of precision, yields a perfectly reliable measure of a person's ability to do just such tasks as those set by the test. His true ability in such tasks, to be sure, approximates more or less roughly the ability he demonstrated when he took the test. The more reliable the test, and the more skillfully it has been given, the narrower is this zone of approximation. With a highly reliable test, the chances are good that an estimated true score approximates an obtained score fairly closely. But even here it is safer to

think of the zone or band within which his true score probably lies, rather than to think only of his reported score, or of his estimated true score.

When evaluating an applicant's scores, it is not always remembered that an estimated true score is always *nearer the mean* of the standard scale than is the obtained score from which the estimate is made. If the reliability of the test is high, this regression toward the mean is slight; but as reliability diminishes, the tendency increases for true scores to approach the mean. At the lower limit—that is, in the case of a hypothetical test with no reliability whatsoever—everyone's "true" score would be precisely at the middle of the scale, whether estimated from a high obtained score or a low one; and the chances would be zero that any other score would more correctly represent a person's performance in the task set by such a perfectly unreliable test. The interpreter of scores must bear in mind this tendency of true scores to be nearer the mean than the obtained scores from which they are estimated.

Scores which deviate most widely from the average—the extremely high or low scores in which an examiner is certain to be most interested—are the very ones which have to be discounted the most. So far as the statistical probabilities are concerned, the chances are that the person's true abilities do not deviate from the average quite as much as these extreme scores would at first indicate.

This same principle holds when es-

timating a person's score in a criterion of subsequent accomplishment from his score in an aptitude test, when the coefficient of correlation between test scores and this criterion is known. The conservative examiner keeps before his mind's eye the zone of approximation—narrow or wide—within which the person's ability in the criterion probably lies; for the chances are only 68 in a hundred that the actual criterion score will be somewhere within a range represented by \pm the Standard Error of Estimate on either side of his most probable score.

Cumulative Tests and Records

It is, however, quite within the power of examiners to narrow somewhat the zones of uncertainty. A single straw tells which way the wind blows; but an anxious farmer looks to his weather vane, and a meteorologist uses an instrument which records velocity as well as direction. The psychometrist likewise spares no pains to get the most reliable measures of aptitude he can. He realizes clearly how wide the zone of approximation is whenever an estimate of capacity for future accomplishment is based on a single test score. If the test is repeated and the average of the two performances is computed, the combined score yields an estimate not twice as good, but nevertheless better than that from a single measure. And when a whole battery of pertinent tests is brought to bear, the properly weighted contribution of each to the total score

makes further inroads against the zone of uncertainty. Now bring into the picture the developmental history from the cumulative record, and all that has been learned in interview. Ascertain whether other pertinent facts tend to conflict with or to confirm the test indications. If most of the data harmonize, if they are seen to point even with uncertain fingers in the same direction, the examiner is warranted in arriving at tentative conclusions which he should hesitate to make in the absence of such *cumulative* indications of aptitude.

Recent Advances in Testing

At this point mention may be made of recent advances in psychological testing, whereby the reliability of certain measures has been raised and their dependability increased as symptoms of aptitude.

The techniques of factorial analysis developed by Thurstone are yielding deeper insights into the meaning of scores.

The optimal weights to be attached to various measures when used in combination are being ascertained with the aid of multiple regression equations.

At the same time, jobs are being studied more intensively, and the baffling problem of finding valid criteria of satisfactory performance is being attacked rather more energetically than of old, for instance, by a research staff in the U. S. Public Employment Service, and the psychologists at Procter and Gamble.

Of specific tests, we take note that

the I. E. R. Assembly Tests for Girls has been revised by Burr and Metcalfe, shortened, simplified in its administration, and made more objective in its scoring methods. Only seven of the original eleven sub-tests have been retained. The battery can now be given with a 30-minute time limit, with confidence that any woman or girl who has not finished all seven tasks within that time is unlikely to excel in a factory job, working with her hands. The seventh sub-test, paper-trimming, has proved to be especially useful as a measure of manual coordination. Two of the other sub-tests measure aptitude for the simplest packing, wrapping and assembly jobs. Two require the kinds of manual and perceptual abilities needed in more difficult assembly. And two are indicative of the candidates aptitude for training in needle-work. A minimum critical total score of 38 has been found to indicate lack of aptitude for factory work of any sort.

Tests of Versatility

Frazier's Card Dropping Tests developed several years ago in the paper-box-making plant of the Denison Manufacturing Co. as part of a battery for measuring the kind of manual versatility required by many sorts of bench-work, now comes freshly into the picture. This test sets four simple tasks and yields five separate measures of the applicant's manual dexterity. Frazier wanted to hire girls who subsequently, after six months or a year of training on the

job, would show satisfactory manual versatility, in the sense that they could rather quickly shift from a job on which they were quite proficient to a similar but slightly different job, without having to spend too long in working up the new skills. His most significant discovery was this: The successful girls turned out to be those who had done better than average on all, or practically all, of the dexterity tests in the battery. Candidates who had done extremely well on some of these tests but were a little below average in others, lacked the manual versatility needed in bench-work of this kind.

The Kent-Shakow form-board has for several years been recognized as a promising means of measuring intelligence in dealing with spatial relations—an essential component of mechanical intelligence. But general and industrial norms have been lacking. These are now being supplied, thanks to the research activities of the Cincinnati Employment Center, and this test may now be expected to take its place as one of the useful aids in estimating the relative promise of candidates for positions such as machine-shop apprentice, and candidates for training in draftsmanship, difficult assembly jobs, and engineering.

Stanford-Binet Revised

In the field of intelligence testing, the most interesting news is that Terman and his collaborators have completed a thorough revision of the Stanford-Binet Scale. Unevennesses have been ironed out. The scale has

been extended downward, and also upward to the superior adult level. Moreover, two alternative equivalent sets of tasks are provided, so that an individual may be re-tested when necessary without using the same problems. The test materials and equipment, together with a book by Terman describing this revision and its uses, will be available from Houghton, Mifflin & Co. in January. A test of this kind is of interest in business and industry, not alone because of what it can tell about an applicant's general level of intelligence. Some of the tasks require verbal facility; others, numerical or mathematical ability; still others, ability to deal with space relations, or to exercise mechanical ingenuity, or to analyze, or to see abstract relationships. By taking note of the partial scores—the detailed features of the individual's intelligence profile, as it were—it is possible to estimate an applicant's relative aptitude for certain kinds of training. The Vocational Service for Juniors, for example, has found that reference to such Binet test profiles is of assistance when comparing a young person's aptitude for technological work with his aptitude for linguistic training. It may well be that research with these Binet tests in industry will eventually demonstrate for them a field of usefulness comparable to that which they have long filled in schools and social agencies.

Some of the group tests of intelligence, too, have been subjected to the fine-toothed comb of item analysis, to

locate and get rid of the "bugs," the antiquated, ambiguous, or useless items. The widely used Bureau Test VI, recently revised in a few of its details, is now being subjected to a more thorough overhauling by Bennett of the Psychological Corporation.

Short but fairly reliable mental alertness tests of this sort will always have a place in employment practice, when time is lacking in which to administer more detailed and comprehensive examinations. A definite tendency may be noted, however, in industry as an education, toward the abandonment of omnibus tests which yield but a single general score in favor of batteries like the Scovill Classification Test which measure separately several important components of general ability. Such tests take longer to give; but the scores are more significant when an applicant's aptitudes are in question.

As for aids in ascertaining vocational interests, the most important development of the past year has been the appearance of Strong's Vocational Interest Blank for Women.

Training and Research

In conclusion may I leave in your minds two thoughts with reference to conditions most essential to future progress.

First, the selection and administration of aptitude tests, and above all the interpretation of test scores, is a technical matter, requiring mature judgment and wide familiarity with the various occupations, as well as a

mastery of differential psychology and the statistical theory of probabilities. The task is much too important and complicated to be turned over to a member of the employment staff with little psychological background except what he has got out of books on the subject. Such a plunge into experimentation with the practical use of tests has sometimes been made, with trivial, if not shocking, consequences. Curiously, this gamble has been taken by judicious executives who would think twice before putting the physical examination of their families and employees into the charge of a medical graduate who had not yet had his two years of internship. There is need today for more and better training for employment examiners, training of a joint cooperative sort, so that employment managers and counselors who know the occupations may become grounded also in the fundamentals of vocational psychology, and so that psychologists may learn intimately the world of industry.

Second and finally, the most vital need of all is for research—brilliant, thorough, persistent, basic research. Aptitude testing has indeed progressed far since Sir Francis Galton

and McKeen Cattell more than half a century ago first sketched the outlines of differential psychology—thanks to Thorndike, Binet, Witmer, Terman, Münsterberg, the Army psychologists, the Carnegie group, Link, Poffenberger, O'Rourke, Viteles, Hull, Pond, and many besides. These have laid solid foundations. On their work, industry may now erect, if it will, a superstructure of sound practice. The time has arrived to go about it with a thoroughness comparable to that of the industrial research laboratories for chemical and physical investigation, as Procter and Gamble have been doing for several years.

Employment is steadily on the increase. There are shortages in many lines of skilled and executive work which can be filled only by training new employees. The number of applicants is large. Their aptitudes are varied. The possibility of choosing for each vacancy a highly promising candidate was never better. This situation is an ideal one in which not only to apply what is now known, but also to undertake research which will push forward the boundaries of knowledge regarding aptitudes and aptitude testing.

Will you One Day be Amazed to Find Your Employees Striking Against You? It is Better to Make a Labor Relations Audit and Get Your Amazement Looking at What You are Doing to Your Employees.

On Lewis's Prospect List

By CHARLES S. SLOCOMBE

Personnel Research Federation

IN A recent issue of the Bulletin of the National Electrical Manufacturer's Association, members were urged, in view of the current labor situation, to undertake an industrial relations inventory or audit.

"Many companies at this time take an inventory of their accomplishments during the past year and set up new goals, or new objectives, for the coming year. As we approach 1937, we commend to members the taking of an inventory of their industrial relations and the setting up of definite objectives for 1937 in that field. An inventory or audit of industrial relations should include external, as well as internal factors."

Interested to see what such an audit would reveal, we have studied the report of Proceedings of a Meeting of

the Executive Committee of the Joint Conference Committee of one member company of the National Electrical Manufacturer's Association.

Sessions were held on three half days, spread over two weeks, there being in attendance eleven executives and ten employee representatives. The General Works Manager acted as Chairman.

Below is a summary of 34 items brought up for consideration and the action that was taken in regard to each. 34 items were introduced by employees and one by management.

This summary was prepared as an inventory of this employee representation conference. The next step was to analyse and tabulate these matters and actions, separating them into

SUMMARY OF JOINT CONFERENCE

1st Session

Matters brought up

- 1) Request from 3rd truck men for week to start Sunday instead of Saturday when there is a picnic, overtime rules being waived for occasion.
- 2) Defer first payday in July one day on account July 4 coming in.
- 3) Report of committee previously set up to poll workers on whether they want weekly pay in preference to present practice of 2 paydays monthly.
- 4) Report of Joint Industrial Relations Committee recommending change in classification schedule.
- 5) Report of J I R C recommending change of rules so that hours for holidays be uniform with those of Saturday and Sunday.
- 6) Report of J I R C regarding semi annual review. (a) Said not sufficient care on part of supervisors in recording information, (b) advised that heads of divisions should personally see that promises are not neglected, (c) said supervision did not adjust certain supervisory rates in accordance with rate chart.
- 7) What has developed regarding vacations with pay for employees with 5 years service like other companies.
- 8) Distribution of work not good, overtime in some places, slackness in others.
- 9) Complaints being made regarding fumes.
- 10) Threatening letter saying strike of caddies at golf club would affect employment in shops.
- 11) Dissatisfaction of new employees that they do not get on incentive plan till they get 100%
- 12) Suggest that one gate be kept open at specified times for those working overtime.
- 13) Police working 48 hours.
- 14) Why not paid night turn and overtime bonus.
- 15) Men doing work other than policing.
- 16) Long bears.
- 17) Time and a half Sundays same as shop employees.
- 18) Time allowed group leader for instruction.
- 19) Instruction period not settled.
- 20) Quit slip of girl to be held up.
- 21) Time should be set out so all can see.
- 22) Point made at last meeting not in record.
- 23) Request for 20% increase in pay.

Action

- Representatives not unanimous in request. Left for them to ascertain views of constituents. Management attitude unfavorable.
- No comment by employees, *accepted*.
- Present schedule favored by majority, but representatives objected on grounds that employees were told or thought that this would mean paying by check, which caused them to vote against. *Tabled*.
- Chairman said just received report, would take under consideration.
- Accepted*
- Management will circularize report among superintendents.
- Vice president is studying. *Dropped*.
- Started to go into matter, will ask two officials to go into it. *Dropped*.
- Matter being fixed up and will be completed within week. *Dropped*.
- Has no bearing on company matters as employees are judged on merits. Letter unauthorized. *Matter dropped*.
- Management said, "I do not believe wage plan has been fully explained to new employees." Argument re logic. *Matter dropped*.
- Will discuss with official concerned.
- Schedule is 40 but there are exceptions.
- Incorporated in rates, pay favorable in comparison.
- Not answered. *Dropped*.
- Being looked into.
- Matter considered when rates set. Rates comparable with local rates for similar work.
- Matter for Committeeman of Section.
- Will ask official to study.
- Matter for Personnel Director.
- Suggest representative talk to official.
- Told to see Secretary.
- Tables of wages compared with those of NICB.

Adjourned

2nd Session

Item 1 continued

24 Railroad employees of Company not in wage policy plan.

Item 4 continued

25 continued.

24 Quite a difference in pay of janitors, some paid 43¢ on day work, others 52¢ on incentives.

25) Difference of take out of day worker and incentive worker.

26 Minimum rate of 30¢.

Agreed by management.

Paid according to railroad wage scale. *Dropped.*

Chairman said had not had time to consider.

Further arguments back and forth about data and criticism of wage policy plan. Final answer. *NO.* Matter being studied, last review shows matter needs attention. *Dropped.*If former given same as latter would be 18% increase. No decision. *Dropped.*Have made progress, only 120 below 50¢ and these liabilities. Every effort will be made to adjust. *Dropped.*

Adjourned.

3rd Session

27) Request for 30 hour week.

28) ½ hour lunch period with pay.

29) Multiple machine operation.

30) Election of group leaders.

31) Request that group efficiency be set at 120% instead of 100%.

7) Continued.

33 That recording of furloughs be continued.

34) Accident hazard at a gate.

35) Do temporary employees share work equally with older employees.

Arguments back and forth. *No.**No.*Has come up before. Cases for review mentioned. Personnel Director said he thought they were settled but will look into the matter. Set up time wrong. *No.* Administration wrong not plan. 95% good group leaders. Matter may be taken up with supervisor where not. *No.*

Await report on matter.

Being studied

Accounting department following instruction to cut expense. If employees have simple system to suggest talk it over with official. *No.*

Will be looked into.

Dropped.

Adjourned

minor matters and major matters. The results of this analysis are shown in Table I, in which the figures in brackets show the estimated time taken up in discussion of each item.

Now we have a balance sheet to audit.

On one side we see that of 34 matters brought up by employees; their requests were granted in 2 cases, and employees accepted the one proposal

management made. These three items, numbers 1, 2, and 5 are:

(1) Request of third trick men regarding their starting time when there is a picnic.

(2) First payday in July to be deferred one day on account of the holiday July 4th.

(5) Hours for holidays to be the same as for Saturdays and Sundays.

TABLE I
Showing Results of Joint Employee Representation Conference

Nature of matter	Action						
	Granted by management (1)	No by management (2)	Will take under consideration (3)	Referred to official (4)	Dropped (5)	Explained (6)	Miscellaneous (7)
<i>Minor Matters</i>							
Arrangement of working hours	2 (15)						
Pay arrangements	2 (3, 8)		1 (12)				
Distribution of work					1 (3)		
Complaint re fumes					1 (2)		
Caddies					1 (3)		
New employees					1 (6)		
Gate to be open				1 (2)			
Railway employees						1 (2)	
Pay of janitors					1 (2)		
Recording of furloughs		1 (12)					
Accident hazard				1 (2)			
Temporary employees					1 (5)		
Classification schedule			1 (8)				
Omission in record				1 (1)			
Total (minors)	3	1	2	3	6	1	16
<i>Major Matters</i>							
Semi annual reviews							1 (15) Will circulate report
Vacations			1 (15)				
Police (5 complaints)					5 (10)		
Group leaders (4 complaints)							4 (8) passed buck
Wage increase		1 (90)					
Wage differentials					1 (15)		
Minimum rate					1 (15)		
30 hr. week		1 (20)					
Lunch period with pay		1 (15)					
Multiple machine operation		1 (15)					
Election of leaders		1 (20)					
Group efficiency %			1 (15)				
Total (majors)	0	5	2	3	7	0	19
Grand Total	3	6	4	3	13	1	35

Account Not Balanced

On the other side we see 32 items in which the employees did not get what they asked for. (Several items were taken under consideration, but these should be balanced by an equal number referred forward from the previous meeting.)

Thus employees were granted only 6 % of their requests. This is obviously too small a percentage for preserving or building good labor relations. This is the first serious matter shown up by this audit.

What could be done in future meetings so that a better balance will be arrived at?

Let us look at the 13 items in column (5), those that were brought up by employees and dropped without anyone being satisfied. Half of these are minor matters, but nevertheless ones upon which the employees represent their views. The others are matters of comparative importance. Let us take number (11) as an example to see how such an item can be dealt with in future so that it will appear in the "Granted" column. This dealt with dissatisfaction of new employees regarding wages during their learning period. It was brought up by representatives, discussed for six minutes, no conclusion arrived at and then the meeting passed on to other matters.

It is natural to assume that whether the employees were dissatisfied with the general ruling on this matter, or whether they had a particular case of apparent injustice in mind, they were

concerned about it. During the six minutes discussion the Chairman said "I rather believe that there has been some misunderstanding in the matter. That is, I don't believe the wage plan (for new employees) has been fully explained."

Now it would seem possible for the Chairman in a meeting to ask the representatives to explain more fully just what it is they are dissatisfied with, or to say that he will investigate the matter, and have the rule altered if necessary, or have any individual cases of injustice straightened out.

In this way he could change the employee request into what it really is, namely a request that the matter of learning time for new employees should be made more fair to all. Such a request could be granted, the matter studied, straightened out, and the item appear in the "Granted" column at the next meeting.

Or if it has still to appear in the "Under Consideration" column the Chairman could at the following meeting, (if investigation has been undertaken) bring the matter up as one referred over, ask the employees if they are now satisfied, and if the job has been done well, their reply will be "Yes" and so the item will appear in the "Granted" column.

Other items which appear in this "Dropped" column will also by suitable treatment in conference appear in the "Granted" column, and so help to produce a better balanced industrial relations balance sheet.

Even though they were "Dropped" at the meeting we have discussed, these items should be studied, remedies put into effect, and the items brought up again at the next meeting. If possible they should then be finally disposed of, instead of remaining, as they are now, as sources of dissatisfaction.

Where matters are being looked into or studied (Nos. 7, 8, 16, 24, 26), some explanation or progress report should be made.

Items Carried Forward

Items in column (4), "Referred to Official" are not ones which can very well at a meeting be placed in any other category. But, this is only one of a series of meetings, and if meetings are conducted along lines here suggested, matters referred forward from one meeting to the next should be brought up again by management, (if not by employees) and employees asked if they are satisfied with action taken in the interim. This is not a matter of form, but a businesslike check to see that matters represented to management received adequate investigation and consideration, and that a solution arrived at is, wherever possible, satisfactory to employees. They would then as a matter of book-keeping, so to speak, go to swell the "Granted by Management" column. That very very few such referred forward items appear in the minutes of the meeting under consideration, shows that previous meetings have been conducted as this one was.

Five items in the miscellaneous

column are a little worrying. The company has a plan for semiannual rate reviews of each employee's pay. A joint committee reported that superintendents were lax in the part which they should take in preparing material for the reviewing committee, and in putting into effect schedules agreed upon by the committee. When this report was presented to the management in meeting, after 15 minutes consideration the Chairman said, "We will circulate this report among the superintendents, with a view to having poor conditions corrected where found to exist."

This must have been an incredibly unsatisfactory answer to the employees. It is obvious that in the setting up of the plan, superintendents were instructed in the part which they should play. Here the employees are showing management that they are not carrying out these instructions. Anyone with any experience of superintendents knows that some of them at least, are slack, and that circulating a piece of paper, on a subject in which they are not particularly interested, is absolutely ineffective in taking up the slackness. It is likely that the circulation of the report will be ineffective, that this subject will remain as a sore spot among employees, and that it will come up in meetings time and time again in the future.

Next time it does, the Chairman might say, "I will talk to all the superintendents (or I will investigate the matter), and will see that there will be no further cause for com-

plaint. If there is, please do not hesitate to bring it to my attention." This will place the item in the "Granted" column, and dispose of it.

Neglect

We see the same general type of oversight on the part of the Chairman in the case cited above regarding learning time of new employees. For a man in his position to say, "I rather believe there has been some misunderstanding in the matter. I do not think the wage plan has been fully explained to (them)," and then not do anything or promise to do anything about the matter is hard to understand under modern labor conditions, when it is so very necessary to see that employees fully understand company policies. Here again is a sore spot that will rise up to bother management again.

Under items 18 to 21, one of the matters brought up was the fact that in the absence of explicit rules regarding instructing new employees by group leaders, a girl was due to be fired because she had not learned fast enough. Employees asked that the quit slip of the girl (one of a family of six whose father only had two days work a week) should be held up, pending investigation.

The Chairman said, "The Personnel Director should study this matter." The Personnel Director was present in the meeting but, instead of saying, "I will investigate the case immediately and see that no injustice is done," he said nothing.

Pick Up the Telephone

We have seen somewhat similar cases in conferences in unionized companies and seen the General Manager right in the meeting, pick up the telephone, and order that the employee concerned should be retained on the company payroll pending investigation. This method of dealing with such cases may be unnecessarily dramatic, but it does serve to indicate to employees that top management is personally concerned about fairness to each and every employee, and is particularly so where any questions of family hardship is involved.

In the company under consideration the Chairman should not let the impression be created, that he is not interested in whether a girl is fired or not, and that it is somebody else's business. He should rather go out of his way to show his personal interest in employees. Then they will not be so antagonistic in such matters as wage negotiations.

All four complaints regarding matters involving group leaders were dealt with similarly—responsibility passed to other officials who were present in the meeting, but who did not say they accepted any responsibility, or promise to do anything about them.

So we find 19 items of major and minor significance. When similar matters come up in future meetings, they should be dealt with so that they appear in the "Granted" column and help towards a favorable

balance. They should not be left unsettled, to come up and pester the company again.

Granted

When we say appear in the "Granted" column we do not intend to suggest that all requests of employees will or should be granted. But we do believe that in everyone of these cases there is some slight or major injustice, real or imagined, some slackness of officials, or some out of date rule. According to the constitution of the representation plan, it is the duty of employees to bring these matters to the attention of top management, and also it is the duty of management to treat the requests of employees with proper respect, and to effect such remedies as are reasonably possible.

The evidence from this meeting, in which all matters but one were dealt with in periods ranging from 1 to 15 minutes, and few promises made that more extended studies would be made, seems however to show rather an impatience with employee requests.

Wage Increase Refused

We come now to the questions to which the Chairman answered "No."

The request for a 20% wage increase was the most important item discussed. The company has reputedly a liberal wage policy (which cannot be outlined here as it would serve to identify the company). Judged by any reasonable standards, therefore the employees were not justified in asking for a wage increase.

But the real trouble is that, when the present wage policy was adopted, it was not placed before the employee body to obtain their views on it. It was a management conceived plan, which the employees do not seem to like. At any rate, at every meeting employees bring the subject up, and spend much time expressing their dissatisfaction and disapproval of it, and ask for a wage increase. Their discussions show that what they really want is a change in the wage policy.

As this problem will have to be solved sooner or later, it should be tackled immediately. It would seem advisable to give employees plenty of time and opportunity to discuss the matter from every angle, so that the management can decide whether the policy should be changed in any respects or whether employee dissatisfaction is due to misunderstandings which can be cleared up by adequate explanation of the policy to employees.

Part of the wage discussion was also taken up by employees' refusing to accept a set of statistics showing their own plant wages in comparison with wage figures prepared by the National Industrial Conference Board. The statistics were correct, but as they did not relate specifically to the area in which the plant was located, or to the electrical manufacturing industry, and failed to give detailed comparisons, ranges, maxima and minima, etc., they were rejected by employees as not being a proper basis for calculation of their own wage scales. Bitter discussions of this kind

can be avoided in future if properly prepared statistics are presented, or if the wage policy of the company is decided first.

30 Hour Week Refused

The request for a 30 hour week was also dealt with in a manner harmful to the industrial relations of the company. It is obvious to everyone that a single manufacturing plant cannot go to a 30 hour week, while others remain on a 40 hour week or longer. Yet this request now comes up in many representation meetings in many companies. One company, by adroit discussion, succeeded in getting employee representatives to suggest that the matter be deferred pending Congressional legislation. While this is one way of solving the problem, we suggest that the bringing up of this subject by employees provides a rare opportunity to discuss the economics of business with representatives in frank but simple terms, so that they can learn what every sound economist knows, that the 30 hour week is one of the most unsound proposals that has been put forward since the beginning of the century. This procedure is particularly desirable in the company under consideration, for the employees in their advocacy of the 30 hour week showed much ignorance and used many incredibly distorted arguments. These ideas should be eliminated from their minds as soon as possible.

The Chairman answered the request with the bald, true, general and unconvincing statement, "These prob-

lems like others are mutual and cannot be solved exclusively by one group. If there is nothing further on this matter we will take up the next point."

And so the pattern runs through the other "No" matters.

Thinking in terms of balance sheet again, we see how necessary it is that meetings be conducted so that there are many more items on the credit side which increase employee goodwill, and fewer items which tend to decrease employee goodwill.

Wrong Impression Created

This audit has perhaps shown the Chairman of the meeting as a hard inhuman, unfriendly, impatient man, a truly representative "economic royalist." And that is just the impression the minutes of this meeting create. (Note how dangerous it is to have this impression created in the minds of employees who read the minutes but never see the man.)

Actually he is a very human, obliging person with a ready smile, though by no means lacking in firmness, in short, an ideal personality for the position he occupies.

Audit Points to 1937 Program

We suspect that this contradiction may be avoided in future if these suggestions are followed:

(1) The petty, trivial and time consuming complaints and foolish arguments of employees cannot be brushed aside. Impatient attempts to get rid of them in a hurry just defeats its own end, so that when they come

up they should be disposed of properly the first time.

(2) If the personnel department is properly keyed into the situation, it will prevent many of these grievances arising.

(3) The load of technical and administrative work that the General Works Manager is carrying is probably so heavy that he does not have time to give due consideration to labor relations.

(4) In view of this fact, and as he cannot delegate this work, he should have a staff assistant whose sole job would be to prepare material for him, to think out and advise him on matters of strategy in dealing with employees and conducting meetings, to follow up matters decided upon to see that they are carried out, and to do all the smoothing out work that a staff job involves. (This man should *not* be head of the Personnel Department.)

These steps should be taken immediately, for labor organizers are at present working in this plant, and remarks made by employee representatives in the meeting show that (a) employees are convinced that union wages are higher than plant wages, and (b) employees definitely look to labor unions for leadership in such matters as 30 hour week, multiple machine operation, etc. This means that the organizers have gotten a toe hold, though there is little evidence that they are prompting any of the requests made by employees in meetings. (We have studied minutes of meetings of this company periodically for the last three years,

and the general pattern has been the same all the time.)

But this audit clearly shows how these organizers have, in the matters not properly disposed of in meetings, excellent campaign material. And we can see how 20 of these unsettled grievances might easily be starters of sit down strikes.

Nevertheless it is probable that there is still sufficient employee loyalty, which coupled with employee inertia and ignorant suspicion of labor unions, can be used to offset organization of the plant. The company must however, during this year, avoid the pitfalls revealed by this audit, and work in the ways suggested to build up a credit balance of employee goodwill.

Everyone Should Audit

The above demonstrates a type of labor relations audit that every company should make, whether it is unionized or not. It has several advantages over other types of audit or inventory: (1) it brings home directly to top management a realization that the tone of industrial relations through the plant is set by top management; (2) it shows up the immediate matters of employee dissatisfaction, and points to ways of eliminating them in the correct way, that is through instructions originating from the chief operating official; (3) if made continuously it would undoubtedly point to changes in policies, organization structure, or personnel practices that might be necessary to increase harmony of labor relations.

A description of "In Service" Training Programs based on fourteen years experience in three geographical areas in which 6,000 individuals have been participants at Federal, State, County, and Municipal levels.

Training Programs *for* Government Employees

By EMERY E. OLSON

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THE improvement of personnel engaged in transacting public business is coming to be recognized as a vital necessity in a nation whose people now rely more and more upon group action for the satisfaction of their needs. The Commission of Inquiry Report on Better Government Personnel emphasized "in service" training as a major feature of its program. Increasing the productivity and usefulness of the public servant reflects directly and immediately upon one-half of the budget totals of the nation, the states, and the local government units, and at the same time, strengthens the chance for the survival of democracy.

In three widely scattered areas, Washington, D. C., Los Angeles and Seattle, approximately six thousand individuals have been participants in training programs intended for officials and employees of Federal, State, County, City, and District units, and while holding a position have studied courses designed to develop a more efficient public service.

Washington Program

With the employees of the Federal Government in mind, The American University of Washington, D. C. two years ago established a School of Public Affairs designed to carry forward the following objectives:

1. To make available for employes of governmental units a training and educational program based on professional standards and ideals.

2. To make possible more efficient service in present positions through betterment of service attitudes, improvement of skills, study of techniques, and the vitalizing of ambitions.

3. To furnish special training enabling employes to prepare themselves for positions of greater responsibility.

4. To professionalize the public service by setting up standards of achievement and ethical concepts worthy of individual and group support.

5. To build morale within the service.

6. To build prestige for the service as a career.

7. To make available academic awards for study and research.

Policies and Methods

Policies and methods can be best illustrated by a statement of program in terms of courses offered:

Use of Administrative Statistics
 Public Personnel Management
 Management and Supervision
 Problems of Administration Common to all Departments arising out of their relationships to other departments and the public.
 The Development, Installation and Administration of Classification and Compensation Plans.
 Seminar in Housing and Home Financing
 Introduction to Governmental Accounting
 Changing Relations between Congress and the Executive
 Problems of Public Personnel Management
 Placement Procedures
 Political Parties
 Government Correspondence
 The Social Security Act: Its Administrative Background and Implications
 Advanced Accounting as applied to Farm Credit Administration
 Effective Speech
 Seminar in Training
 Introduction to Public Administration
 Principles of Public Administration

Problems in Public Administration
 National Administration: The Problem of Reorganization
 Seminar in Organization and Management
 Principles of Accounting
 Agricultural Economics Affecting Farm Credit Administration
 Federal Budgetary Administration
 Problems of Taxation
 Mathematical Preparation for Statistics
 Elementary Statistical Methods
 Advanced Statistical Analysis
 Labor Statistics
 Statistical Methods applied to Census Data
 Administrative Law
 Federal Regulation of Commerce
 Federal Regulation of Corporate Accounting
 Legal Aspects of Farm Credit Administration
 Government Report Writing
 Farm Credit Administration Correspondence
 Agricultural Economics Affecting Farm Credit Administration
 Economic Geography
 Seminar on Public Finance in Europe

Courses have been in many cases designed for employes of particular agencies with emphasis changed to meet their needs. While avoidance of duplication is a problem which receives attention, as courses are grouped into curricula, the primary purpose of immediate usefulness to the employee in doing his job more efficiently is always kept in mind.

Enrollment figures are indicative of the interest. A nominal tuition fee is charged. Registration for the first year was eighty. Last year this group had increased to three hundred and fifty and the first semester of 1936-7 saw approximately eight hundred in the classes, the standards of achievement having been raised progressively.

Teaching Staff

The faculty is composed of full time educators of broad training and

experience, supplemented by a part-time staff of technical experts and administrators chosen from the federal service because of personal achievement and teaching ability. The work of the School of Public Affairs is greatly strengthened by close association with the Graduate School of the Social Sciences making possible an integrated approach to government problems.

Methods of Instruction

Instruction plans are intended to take advantage of the talent available in Washington and yet retain the continuity of regular class room teaching. In some courses a "double instructorship" obtains with a regular faculty member and an administrator, a researcher, an executive, or official composing the teaching staff for a number of the sessions. Ordinary educational techniques, such as reading assignments, test requirements, projects, examinations, etc., are under the direction of the faculty member and the informal presentation of factual data, departmental organization routine and policy are in the hands of the visiting lecturer who, on the basis of previous conferences, provides a statement of the practical application of administrative principles and techniques and in the discussion period offers an opportunity to relate "today's" problems to fundamental and continuing principles and to efficient practices. Some of the courses are of the seminar type, while others use the lecture and examination procedure. The skillful instructor also finds it possible to

capitalize the experience and background possessed by members of the class. The clearing house function of "in-service" courses is not the least important.

Courses are also enriched through the technique of advisory committees. Supervisors and executives of ten departments are now meeting regularly for purposes of suggestion and criticism, of the teaching materials and methods. Selection of literature and development of case material are among the problems considered by the committees, who meet with the realistic activities of the day fresh in their minds.

Departmental Coöperation

A most significant feature of the project is the development of courses given on a coöperative basis with various departments of the government. For years the Graduate School of the Department of Agriculture has been a most influential factor in the development of a stronger personnel. The courses in statistics, accounting, management and supervision, and personnel administration are now given jointly with this agency. Similar arrangements have been made with the Farm Credit Administration, the Bureau of the Census, and the Bureau of Labor Statistics. During the summer one agency acting jointly with the School of Public Affairs, developed a full time training program for a period of a month for twenty of its field representatives combining departmental practice and fundamental theory in the curriculum.

Informal Relationships

Some work of a more informal nature takes place. The School of Public Affairs has been the agency by means of which individual employees of the federal government have been brought together for an objective consideration of problems of organization and management, while a seminar in training (this year to be known as a Training Conference) bring together representatives of the various departments charged with the responsibility of developing training activities.

Coöperation with the National Institute of Public Affairs has made it possible for its educational director to teach the basic course in Public Administration, and for the internes to register in various courses in the program.

The Federal Government is a huge reservoir of talent for guidance and instruction. Technical experts and administrators have given generously of their leisure time to stimulate the emerging profession of public administration through advice and counsel, not only to this particular program but to others in specialized fields carried on by other colleges and universities in Washington and elsewhere.

It should be emphasized that the School in no way attempts to prepare students for specific civil service examinations. It has as its first objective the individual development of those now constituting a part of the public service.

A New Emphasis

The emphasis is on the needs of the men and women who during the past five, ten, or more years have made their annual contribution to the public service. It is a program designed for those who carried the load during the 20's when private industry and business were most glamorous. It is a program designed for the men and women who have had experience and who possess capacity, but who have not had the opportunity of higher preliminary education such as that now available to the young men and women in our colleges and universities.

Here are thousands of individuals permanently a part of our governmental establishments interested in a "career service." The techniques and the facilities for formal education can be adapted to a program of individual and group improvement for them. The fact that we are working on "part time" and "after hour" programs need not deter us, providing we see clearly the problems involved.

Southern California Program

Among the first attempts to achieve the objectives referred to above, took place in the early twenties, when at the request of public officials, the University of Southern California began a program which has developed so that today its activities are as follows:

1. Short-course or institute on annual basis covering fifteen to twenty fields, attended by fifteen hundred officials and employes from a half dozen states, fifty or more

cities, and Federal agencies, with national and area leaders in charge.

2. Civic Center Division of a School of Government reaching in regular after-hour classes seven to eight hundred employes annually.

3. Annual Women's Civic Conference making available study opportunities on government subjects for seven hundred representatives of three hundred women's organizations.

4. Undergraduate and graduate curricula leading to certificates and degrees.

5. A publication for civics teachers and civics affairs chairmen of clubs and associations.

6. Civic Affairs Council, a citizen group interested in stimulating the study of government. Objective: increased political competency.

7. Speakers clubs. government employes use for training to become effective representatives of government units.

The last nine years have seen this program a regular part of the schedule of employees and citizens in the area. Consistently and methodically carried forward jointly by government and educational authorities, its influence has been evident and effective in the Pacific-Southwest area.

Seattle Program

The summer of 1936 witnessed the first annual Institute of Government at the University of Washington in Seattle sponsored by the Bureau of Governmental Research in cooperation with the Association of Washington cities and the County Supervisors Association. A hundred and seventy-five officials and employees gathered for class room consideration of local government problems of the Pacific Northwest.

There is a growing interest in

educational procedures in facing governmental problems. Similar to this have been the hundreds of short courses and institutes held annually by state leagues of municipalities and reaching twenty to thirty thousand local governmental officers and employees in a large number of states. The American Municipal Association, a federation of thirty-nine state leagues of municipalities reports a growing interest and in a recent publication (*Toward Competent Government*) has emphasized the wide variety of problems involved in public service training. State Boards of Education in cooperation with the office of Education of the Federal government are even now in a position to report satisfactory beginnings in fire and police training in Virginia, California, and Massachusetts.

Institutions of both college and secondary level in metropolitan areas such as Chicago, Cincinnati, Detroit, San Francisco, Seattle, Los Angeles, New York and Philadelphia are now considering or have already taken steps to make similar courses available for local federal employees as well as for state and municipal employees located in the areas. No greater service can be rendered by a metropolitan institution than to coordinate its educational program so as to be of direct usefulness to the public employees of the governmental unit serving the area in which it is located.

Aims, Subjects, Methods, Job Training, Lectures, Conferences, Clinics, Use of Films, Measuring Results and Integrating Programs with Promotion Policies are all Parts of a Training Plan

Training of Adult Workers

By C. G. SIMPSON, JR.

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VERY often there is a tendency to think of training in terms of training departments, instructors, classrooms, blackboards, and standard practice manuals. This is a limited conception. In its broadest sense training is the development of knowledge and understanding, of habit and skill and attitude—by methods formal and informal, conscious and otherwise, whether self-developed or administered by others. Looked at from this point of view, training is as old as the hills. The first cave man who learned from another how to light a fire by rubbing sticks together was being trained.

It would seem that any discussion of the training of adult workers must be based on a very broad interpretation, if for no other reason than that

most workers reach a reasonable degree of effectiveness without formal training. It may be argued that training is in some degree inevitable because of the human tendency for people to train themselves. Boys learn to play ball, women to dress attractively and men to manage a home through association with others, through observation, reasoning powers, practice, experience, etc. more than through any regular, conscious or planned preparation. In the absence of regular training, workers in business and industry acquire information, habits and attitudes—right and wrong, good, bad and indifferent. Even for those who have had the benefit of some kind of planned training, the benefit frequently forms only one of many

elements in job performance. In general, the training problem of industry is not to supply training where none exists, but to find the most effective and economical methods and apply them as a supplement to, or substitute for, other methods of worker development.

Classification of Adults

For the sake of defining the scope of this discussion, adult workers may be roughly classified as follows:

1. *Manual Workers*
Truck drivers, Mechanics, Machine operators, etc.
2. *"White-collar" Workers*
Office workers, salespeople, Chemists, etc.
3. *Line Supervisors*
Shop Foremen, Chief Clerks, Branch Managers, etc.
4. *Major Executives*
Company officers, Department and Division Heads, etc.

The discussion excludes any consideration of executive training and bears mainly on the development of manual and "white-collar" workers with occasional reference to what is generally called "foremen training."

Aims of Adult Development

It must be assumed that all efforts of business and industry to develop and improve workers have as their ultimate aim the improvement of the total results of the enterprise. However, one of the first essentials for activity directed toward worker development is a clear-cut understanding of the specific results to be striven for. Some typical examples of these specific aims are:

1. Establish a higher standard of safety and accident prevention.

2. Develop personnel for a new process or machine.
3. Reduce losses caused by material spoilage, disposition of scrap, etc.
4. Develop coöperation and team-work between production and technical, or staff, units.
5. Improve the attitude of employees toward their work, their supervisors, or the company.
6. Raise the quality standard of the product or service.
7. Discover and develop supervisory ability to handle men, to plan and schedule work, to budget labor and cost requirements, to minimize "detail" work, etc.
8. Improve relations with distributors, dealers, or users of the product or service.

Subjects

Some of the specific aims of worker training have already been indicated, but before discussing training methods it may be well to identify some types of subject material.

In the field of direct *job performance* there is training for skills and aptitudes: ambidexterity and manipulative ability may be developed on an instrument assembly line; the production of a group of billing clerks may be increased by training in quick methods of calculation and posting, uniformity of product may be increased by teaching an inspector the effective use of a sizer, a color-matching device, or an indicating gauge. Then there is technical information: a knowledge of tire construction and tire traction for automobile accessories salesmen; a knowledge of textiles for process workers in a cleaning and dyeing establishment; information on commercial law for department store credit clerks. Still again there are problems of company policy and uniform practice: the discipline of employees, allocation of costs to proper accounts, pro-

cedures on employee absence, the return of damaged goods.

Some organizations seeking *general improvement of the business* have developed general employee training programs on customer or public relations. Usually these plans provide information on the origin and organization of the business, the product or service rendered, the company policy on quality and price, and the technique of dealing with people. Such a general program is designed to improve not only the results of on-the-job relations with customers, but also public confidence as influenced by the social relations of employees with relatives, friends, and acquaintances. In most cases employees learn a great deal about their company and having the facts, they become interested in giving the information to others. An interesting by-product is that frequently there are evidences of increased job satisfaction and performance among those who have no relations during working hours with customers or the public. The same type of educational program may be used for the development of extramural employee sales activities in some firms—that is, sales efforts by non-sales employees outside of regular working hours. Some firms permit such employees to quote prices, write the order and accept any accompanying payment. Others merely urge employees to talk about the product, endeavor to arouse interest and report prospects so that a salesman may cement interest and close the sale. Either arrangement backed by em-

ployee possession of the facts, interest in the business, and willingness to use opportunities may go a long way toward increasing volume and profits for the company and increasing earnings for the employees—for nearly always there is material incentive provided for them.

Methods of Training

On-the-job training is probably the original, most basic and certainly the most common type of worker development. By "on-the job" is meant at the scene of the work and during its progress. Illustrative of one method, a new driver-salesman on a laundry route is "doubled-up" with the man whose place he is to take or with an experienced successful driver on another route. The two work together for several days to give the new man opportunity to learn the geographic lay-out of the territory, the scheduling and routing of pickups and deliveries, the loading and unloading of the trucks, the cash routines, the technique of selling the service, collecting for it, etc. This is accomplished by observation, questioning, instruction, practice and constructive criticism. This method has the advantage of being accepted as natural, logical and proven successful in past applications. There are several cautions, however, to be observed. In the first place, a man's job success does not necessarily indicate his ability to teach another. Second, even a successful worker may have weaknesses and bad habits which he may unconsciously com-

municate to a new man, to his detriment. Still another limitation is the difficulty frequently experienced in getting an accurate report on the new man's ability and progress because of the characteristic reluctance of some men to report unfavorably on a fellow-worker. Another method is based on inspection of the work product after its completion. As an example, the inspector at the end of a refrigerator cabinet production line may find evidences of imperfect lacquering and as a result show the spray-painter how to improve the priming of his gun, to turn the surface to be painted in such manner as to obtain the correct angle of light, etc. Still another method is that of individual instruction—Discussing phraseology with a correspondence clerk to improve letters to customers; teaching a truck driver to use a hydrometer and temperature chart to prevent radiator troubles. Still another method is that of rotating a man on several jobs to improve performance in his own job, to provide flexibility of personnel or to prepare for promotion. Experience, or practice, must be recognized as a method in itself. Aside from the general fact that time spent on a job tends toward development of ability, there are certain clear-cut types of work where "practice makes perfect." An elevator operator, particularly on old type elevators, can learn only by practice the exact moment to swing the control lever to bring the car smoothly to the floor level; a plumber learns to wipe a joint very largely through practice and experience.

Meetings

The "lecture" meeting is the kind where a group is brought together for the purpose of listening to a verbal presentation of information. Even where part of the meeting is devoted to group participation in questions or discussion, if the prime object is to present information through the medium of a talk or discourse it may be considered in this category. From the standpoint of training technique most meetings of more than 20 or 25 people would be so classed, but a meeting of only 5 or 10 may just as well be a "lecture." The "lecture" meeting may have the advantages of speedy arrangement, economy, avoidance of repetition, of giving all concerned the same information in the same manner at the same time. However, unless supplementary methods are used, it offers no guarantee of holding attention or that there is individual or group understanding and acceptance. This type of meeting is widely used and undoubtedly has its place in most business organizations, being more effective where its technique of presentation and its limitations are well understood.

Conferences

The conference or discussion type of meeting, as its name suggests, is based on the active participation of the group members in the exchange of ideas and opinions, in thrashing out problems and in reviewing experiences—leading toward the development of a common agreement, a point of view and the stimulation of

thinking processes. Its most common application, in use for many years, has been in the development of foremen.

In the company with which I am associated it has been used continuously with notable success for about five years in the never-ending training of several hundred workmen engaged in installation and service on meters, piping and gas appliances in the customer's home where mechanical proficiency, diagnostic ability and a wide knowledge of hundreds of types of equipment and effective relations with the customer are vitally important. For development in understanding of company policies, fundamentals of business practice and organization, for developing sound thinking, coöperation and the like, the conference method can be highly effective although it may be more slow and more costly than other methods.

Use of Films

Exhibition meetings, so called for the want of a better name, include those at which motion or slide pictures are shown and those where a demonstration is presented. The use of motion pictures and slide films—with and without sound—is finding increased application in business training. Some companies interested in improving employee appreciation of the product or service have developed slide films of 40 to 80 slides at costs as low as \$150. Others, with nationwide organizations, have made slide films with a synchronized re-

cording of the voice of the president of the firm bringing a message to all employees regardless of location. Manufacturers with a national market have used films to carry to distributors, dealers and salesmen the picture story of the manufacturing process, the service organization and policy. A cigar manufacturer has made a three-reel motion picture which tells the whole story from the planting of the seed to the smoker's satisfaction with the final product. This film has been shown to tens of thousands of employees, distributors, retailers and the public. Its cost was about \$10,000. There are reported successes in the use of motion pictures—chiefly in connection with motion study—in determining training needs but it may be assumed that because of the cost factor this method would be used where other methods are relatively ineffective and where the improvement in results would bulk large. Demonstrations of various kinds are also useful in training; e.g., demonstration of a process, a test of the quality or durability of a product, the introduction of a new model or line of merchandise, a "flow" chart of order routine.

Clinics

The "*clinic*" is basically a conference type of meeting but is deserving of special mention because of its novel approach. This type of meeting is so named because its purpose is analogous to that of a hospital clinic which has the function of diagnosis and treatment of ailments. It can

best be described by illustration. About the 20th of the month a district sales manager finds that eight of his force of twenty men are below quota. Because it is important that every effort be made in order that each may bring his sales up to quota by the end of the month the sales manager instructs them to report to the "clinic." At the "clinic" each man describes his particular difficulty—i.e., his "ailment"—in getting orders. One has trouble getting in to see the customer, one gets in but cannot arouse interest, another gets in and arouses interest but is not getting the signature on the line, still another reports that customers claim they want to buy but have no money. Usually the "patients" report different "symptoms" such as those just mentioned. The job of the sales manager, who acts as a leader in the discussion, is to get the other salesmen to show the first "patient" that failure to get in to see the customer is a "symptom" of a lack of courage or wrong technique of approach and then have them encourage the "patient" and help him with practical suggestions on how to get in. After this case is settled they proceed with the problem of arousing the customer's interest, and so on. The result is self-help for the group by the "diagnosis" and "treatment" of each other's "ailments." This type of meeting could be used just as well for collectors, cashiers or office managers.

The *staff meeting* of the supervisory force of a department, division or

other organization unit provides another method of developing information and understanding and thus in the broad interpretation of the word, constitutes a training device. Usually the staff meeting combines elements of the "lecture" and "conference" types.

Committee service may be included under meetings better than in another classification. Committees of foremen, college cadets, staff technicians or workmen for the purpose of making suggestions and recommendations on general policy or specific problems such as safety, order routines, cooperation, and shop grievances are often good training media though perhaps not always recognized as such.

Other Aids

Other aids in the training of adult workers are standard practice manuals, employee magazines, bulletins and letters, booklets, magazines and trade journals, and standard text books. In some companies employees are encouraged to take evening school courses, extension courses and trade courses in the plant as well as those sponsored by state education systems.

Measurement of Results

Any conscious, planned training program should contemplate a measurement of results so far as a measure may be obtained. The specific objective of the project should have been clear from beginning to end. Possibly its nature was such as to

show results as the training got under way. In any event the first check upon results is to ask questions. Has there been improvement? Has the specific aim been satisfied? When? How? What is the proof?

Perhaps more often than not there is no definite, tangible way in which the results may be certified. This should be, however, no more serious a handicap than that involved in changing a wage level or an advertising program. Some methods of checking results are suggested:

1. The reactions, expressed and otherwise, of the supervisory force, the employees and the training instructor or committee.
2. Comparison of individual or group rating or performance records—before and after the training period.
3. Product inspection or service sampling.
4. Oral or written examinations.
5. Comparison of employees who were trained with those who were not.
6. Knowledge or skill tests—before and after.

Development Opportunities

In conclusion, I should like to return to the original point that the training of adults in business and industry should be viewed from a broad interpretation and not merely from a conception of training in the strict sense of formal, planned and

specific instruction. The importance of formal training should be recognized in its proper light and not over-emphasized for the cold fact is that most workers have done fairly well without it. Still further is the fact that a great many foremen in industry and supervisors in business were promoted to supervision on the basis of a non-supervisory job performance with a recognized lack of training or experience for the higher job and admittedly without sound training after having been in the job for months or years.

There is in almost every organization a natural tendency toward the development of "promotion streams"; helper to mechanic to foreman; office boy to clerk to accountant. Such "promotion streams" are desirable to provide a good source for replacements, a means of promoting initiative, incentive and good morale, and reducing turnover. Where there is a company training program they are especially desirable to provide outlets for those who excel as a result of the combination of experience and training and are prepared for advancement. It is also beneficial to establish a transfer policy to change round pegs from square holes to round ones as the employee himself discovers, or his supervisor or training instructor finds, that he is better suited for another type of work, would be happier and more productive if a change could be made; which means it is in the mutual interest of the company and the employee.

Prices Cannot be Reduced Unless Costs
of Manufacture are Reduced. This Can
Come only if Production is Increased
Without Increased Capital Investment.

Increased Worker Productivity Needed

Continuance of Study Sponsored
By The Engineering Foundation

IN two previous papers we have considered the price, wage and profit policy of the U. S. Steel Corporation, taking it as perhaps typical of large scale industrial operations. We concluded from these studies that there was a definite need for such a company to consider the effects of its policies in these matters upon national economic balance, and a continuance of its profits. We now turn to industry as a whole.

When we study operating data for manufacturing industry as a whole, we see a marked contrast to the operations of a single large company such as the U. S. Steel Corporation. In broad terms the difference is the greater improvement in operating efficiency effected by U. S. Steel during the prosperity period, and the greater extent to which it was able, even while making large profits to

pass the benefits of its lower production costs on to consumers in reduced prices.

Data for industry as a whole are presented in Table I. A similar table for the U. S. Steel Corporation was published in the *PERSONNEL JOURNAL*, December, 1936, p. 200.

Because many of the data of industrial operations are obtained from the biennial census of manufactures, years taken for all industry are 1923-1929. Figures for Steel were not taken back to 1923 as many of the figures were not available for that year. Incidentally, the U. S. Steel Corporation was chosen for analysis because it makes public more complete statistics on its operations than any other company.)

(1) One very interesting fact shown in this Table is that the quantity of goods produced, and the value received for these goods (gross sales) increased at about the same rate as the amount of capital invested. There was no appreciable increase in the number of employees.

Plant Increase

This seems to mean that the increase in production of this period was obtained by industry only through increasing the amount of

entirely at its face value, for there are modifying circumstances.

First, we must take into consideration reduced prices. Adjusting gross sales by the B. L. S. index numbers

TABLE I
Operations of Manufacturing Industries, 1923-1929

	1923	1929	1929 as a percentage of 1923
Production (quantity)			135
Gross sales	53.8 billions	69.2 billions	129
Gross sales (adjusted to price index)	53.8 "	72.6 "	135
Operating income	3.29 "	4.31 "	131
Capital investment	40.0 "	52.6 "	131
No. of employees	10.1 millions	10.3 millions	102
Payroll	13.8 billions	15.2 billions	110
Average annual wage per employee	1,370.0 dollars	1,480.0 dollars	108

machinery and plant used. This machinery did not displace labor, but rather on the average each workman was given a bigger and more productive machine to work with. For example, in 1923 a worker with a \$4000 machine produced on the average \$5370 worth of goods. In order that he might increase this production by approximately 30% to \$6900 worth of goods in 1929 he had to be supplied with machinery costing approximately 30% more, that is \$5300.

This is in distinct contrast with the operations of Steel in which output was *increased* substantially, while both capital investment in plant and machinery and labor force were being *decreased*.

This, on the face of it, for industry as a whole, seems to show by contrast with steel a lack of use of engineering advances and management methods. This, however, cannot be

for wholesale prices of finished products we find that had prices not been reduced production of industry would have increased by 35%, whereas gross sales increased by 29% and capital investment by 31%. We have here a first indication that management and industry as a whole did increase productivity somewhat by skill as well as with increased plant.

Secondly, according to Epstein and Clark's analysis of capital and profits for this period, 17% of corporations increased their capital at a greater rate than their sales increased. This would mean that the other 83% of industry increased capital at a lower rate than sales increased. That is to say, 83% of industrial corporations increased production by managerial skill as well as by increased investment.

Many of the 17% who increased capital at a greater rate than sales did

so apparently without necessarily increasing plant. Others, of course, overexpanded their plants beyond their markets, and could not use all their capacity.

It is probable therefore that managerial skill and engineering technology did contribute somewhat to increased productivity. But it is doubtful whether, taking industry as a whole, it did nearly as well as the Steel Corporation in increasing efficiency.

Note In calculating the ratio for increased production we took the gross sales increase of 29%, adjusted it by the wholesale price index of finished and partly finished goods and found that the goods sold in 1929, if sold at 1923 prices would have shown a 35% increase. We use this 35% as the ratio of increased quantity of production. This differs from the figure shown in the Census of Manufactures.

In discussing Steel operations we used Value of Plant for discussion, whereas for industry as a whole we use capital investment. We do not feel that this difference invalidates our conclusions for the movements of Steel's capital were approximately the same as the changes in its value of plant, which was, of course, the major item in its capital.

Payroll Increase

(2) Next we observe that for industry the number of employees increased very slightly, that the total payroll increased by 10% and the average wage per worker increased 8%. This contrasts with the Steel figures where number of employees decreased 9%, total payroll decreased 5% and average wage per worker went up only 4%. On the other hand, Steel employees started at \$1800 and increased their pay to \$1870, whereas for industry as a whole the starting figure was only \$1370 and the increase to \$1480.

(3) All manufacturing increased its production by 35%, reduced its prices slightly so that the increase in cost of these goods was only 29%. It increased its profits by 30%, but as capital investment increased by approximately the same percentage, the increased profits were necessary to take care of the extra interest charges.

This is again in contrast with the operations of Steel which increased its production by 32%, and because of its improvements in efficiency, reduced capital charges and lowered manufacturing costs was able to let its customers have this 32% increased tonnage of steel products at an increased cost of only 17%. At the same time it increased its profits by 40%, while paying its employees 30% higher wages per man than did industry.

No Wide Profit Margin

(4) Profits of Steel were high, and in previous articles we have discussed the possibility of their use in further lowering prices and raising wages. But when we look at profits of all manufacturing industry, and at manufacturing costs, we do not find a margin with which to make much adjustment in prices or wages.

Industry produced \$53.8 billions worth of goods in 1923 at a cost of \$50.5 billions, leaving a profit of approximately \$3.3 billions. In 1929 it produced, at the 1923 price index \$72.6 billions worth of goods at a cost of \$64.9 billions leaving a potential profit of \$7.7 billions or 11.9% on cost of production. Industry ac-

tually divided this potential profit by passing \$3.4 billions to consumers in reduced prices, and took for itself \$4.3 billions in actual profits.

Thus we see that, though potential profits were in billions, they left no margin to make much reduction in prices. In fact in order to make a reduction in wholesale prices proportionate to the reduced prices passed to the consumer by Steel, industry would have had to reduce the total receipts from gross sales to \$65 billions instead of to \$69.2 billions. This would have completely wiped out its profits. And even if industry had not increased its payroll, but given the entire difference to consumers in reduced prices, it could not have equalled the performance of steel in reducing prices to consumers.

Contrasting this with Steel, we see that the latter in 1923 produced \$842 million worth of goods at a cost of \$700 million. In 1929 it produced (if the same price level had obtained) \$1100 million worth of steel at a cost of \$792 million. Thus in 1929 there was a potential profit of \$318 million or 45.4% of cost of production. Thus, its progress in lowering production costs produced a substantial sum, which might have been, and in part was, passed to consumers in lowered prices.

Large Labor Force

(5) There is one factor about the Steel industry which made possible its greater reduction in manufacturing costs. Labor cost as a percentage of manufacturing costs is for Steel more

than twice what it is for industry as a whole, as shown in Table II.

The nature of the Steel Industry as at present organized makes a large labor force and much plant necessary. In contrast with the automobile industry, for example, Table III shows the situation in 1929.

This high proportion of labor cost in the Steel industry, obviously leaves much room for the development of new methods and machinery for displacing labor, and accounts in large measure for the reduction in manu-

TABLE II
Labor Cost as a Percentage of Total Manufacturing Cost

U. S. Steel Corporation . . .	63	(1924)	53.7	(1929)
All manufacturing	27.4	(1923)	23.5	(1929)

TABLE III
Wages Compared with Gross Sales and Capital or Plant

U. S. Steel Corporation . . .	Sales	63	Wages	43
	Plant		Sales	
Automobile Industry	Sales	1.83	Wages	22
	Capital		Sales	

facturing costs which took place during the period 1924-1929.

The lower labor cost of all manufacturing, however, leaves much less room for further reductions, and accounts in part for its inability to reduce prices more than it did in the twenties.

Payroll Percentage Reduced

(6) Nevertheless in industry as a whole there is the same general tendency to reduce the proportion of receipts going to payroll. Gross sales

from 1923, 1929 increased by 29%, but total payroll increased by only 10%. The only way in which this extra output could be absorbed would be through an increase in the payroll in other forms of business such as trade, transportation, farming, etc.

(7) Do dividends disbursed have any effect on purchasing power? Obviously yes, but because a large part of them are saved and become capital for investment, this effect must be small. For example, in 1929, operating income or profit of industry was \$4.3 billion. Of this \$2.9 billion was paid out as dividends. If we assume that 40% of this was saved, the purchasing power of dividends was only about \$1.7 billion.

Brookings Solution Impossible

Our research seems to show that the recommendation made by Harold Moulton and his associates in the Brookings Institution—that the solution to the problem of American progress is the reduction of prices—is not at present possible *for industry as a whole*. There is not sufficient spread between present costs of manufacture and receipts from sales, to make any substantial reduction in prices to increase the purchasing power of the public at large, or even to substan-

tially raise wages to increase the purchasing power of employees.

There is unquestionably such a sufficient spread in some large scale industries, and these companies can unquestionably make a contribution to national economic balance along the lines recommended by Mr. Moulton, but it is a question whether they can entirely solve the problem. (Three companies, General Motors, U. S. Steel, and the Standard Oil of N. J., took one seventh of all American industrial profits in 1929.)

What really is needed throughout American industry, is a reduction in costs of manufacture. This reduction should be obtained without substantially cutting labor force, but rather by increasing productivity per worker. And the increase in productivity per worker should be obtained without increasing the capital investment per worker. If this solution is possible, the result will be reduced costs, making possible reasonable profits on more goods sold at lower prices.

We shall consider in future articles the contribution which personnel men may make to this solution, and the ways in which current labor philosophy must be changed in order that progress may not be blocked.

Personnel Men are Interested in the Satisfaction and Dissatisfactions of Workers Today. But the Students of 1937 will be the Workers (Perhaps Strikers) of 1947. What do They Think Today?

Youth Considers Future Problems

EXTRACT FROM NOTES OF PANEL DISCUSSION

By GRACE S. M. ZORBAUGH

Ohio State University

THE writer has been interested to know what young people are thinking of home and school as aids to youth. What follows in these pages are the findings of a preliminary survey in the winter of 1935-36 and a student interpretation of these findings.

Who can better interpret young people than young people themselves? This in ten words is the reason why, at the 1936 meeting of the Ohio Association of Women Deans, instead of presenting a "report" of the survey, the writer arranged for six of the replying students to present their own interpretation in the form of a panel discussion. Some of the matters brought up by these six students are outlined below.

Vocational Guidance

Two very practical and vital problems entering into the minds of students have to do with fitting the individual for a job. These are the problems of vocational guidance and vocational training. Vocational guidance is helping the student discover what he likes to do and what he is capable of doing. Vocational training is preparing him for whatever occupation he has selected on the basis of such guidance.

The need for guidance was well expressed by a student who answered the questionnaire: "Some are gifted with exceptional talents, and discovering their life's work is not necessary, but the majority must search out their future occupations."

Guidance of Home

What should the home do along the lines of guidance? It is pathetic that many students enter college with their minds void of ideas on occupational likes and dislikes. Indeed many students, owing in part to a lack of parental guidance, leave college in the same vacuous mental state. The parents' job is to encourage aptitudes and vocational inclinations. They definitely should not discourage an unusual original interest manifested by a child. They should if possible learn where their children's interests lie before the children enter college.

A second way in which parents can help in vocational guidance is by keeping up to date on current events and problems. Then the parents will be able to discuss intelligently with their children vocational opportunities and economic conditions such as unemployment.

What should the elementary school do along the lines of guidance? First, the elementary school should begin a definite testing program to discover the abilities and preferences of boys and girls, thus helping them to adjust themselves to the world if they are unable to continue formal education beyond the first eight grades. In the second place, elementary school teachers should be prepared to talk with their pupils in a simple way on any vocational problems that may arise. *The job of counseling begins in the grades.*

The Elementary School

Why do we advocate guidance at such an early age? According to statistics for the year 1932, of 1,000 persons of 21 years or over 2.5 per cent have achieved college degrees; 10.9 per cent have secured high school diplomas; and 86.6 per cent have had less than full high school training. In other words, the mass of young people end their contact with formal education when they have finished grade school or perhaps one or two years of high school. It is imperative, therefore, that vocational guidance be inserted into the elementary school program.

What should the high school do along the lines of guidance? First, a testing program based on the results of the elementary schools should be worked out. The students should be informed of the results. Negative guidance—telling the student what he is unable to do—is destructive unless coupled with positive guidance, telling the student definitely what he is fitted to do.

Second, the high school teachers should be prepared to carry on the work of counseling to an even greater degree than the elementary school teachers. Many high schools, we believe, "pass the buck," as far as guidance is concerned, to colleges. Yet, many students never reach the university level. About one-third of the high school graduates go into college, and about one-eighth go into other institutions. This means that over one-half must rely solely on the high school as a source of guidance.

What should the college do about guidance? Programs of testing and counseling should be carried on more intensively. In addition there should be two modes of helping students, especially freshmen, to orient themselves towards a profession or occupation: (1) lectures in which men in various occupations describe their work, and (2) special conferences between students and deans, sometimes called a survey course. The lectures should help students to plan a curriculum which appeals to them. The survey course such as the one in the University of Chicago—in social science, business management, education and natural science—is helpful for guidance purposes.

Preparation for Jobs

We turn now to vocational training, or preparation for the job. Parents have too little knowledge in this field to be of value. The father's knowledge of employment conditions, for example, is usually restricted to his own field; even there his knowledge is limited. The true job of the parents is to help the children adjust socially and economically. As one student answered the discussionnaire: "The home should not train for a specific occupation, but rather should prevent the child from being a social misfit."

Training, in a general way, we believe, can be begun in the elementary school—teaching poise, speaking ability, etiquette, method of approaching an adult and other similar techniques. Many children

even in the grades are already "business men" on a small scale, such as the newspaper carrier, the boy who cuts your grass, or the 12 year old we recently saw demonstrating a punching balloon in a five and ten cent store, at a wage of \$1.50 for a few hours of selling.

The high school can carry out a program of vocational training in at least five ways. First, the students can be given information on employment trends. It does no good to discover you are potentially a great lawyer, unless you know the employment situation in the law profession. After an analysis of employment conditions, students will be able to select from occupations where there promise to be openings. Second, analysis of specific jobs can be carried out together with analysis of individual students. Third, required subjects can be made to include typing and shorthand—two subjects which are beneficial and frequently necessary. (In college most of the work must be typed; in job-seeking the two subjects are considered fundamental by many employers.) Fourth, the high school can organize a placement bureau to help those students who are not going to college. Fifth, the students can be trained not only to get a job, but to keep it.

In college we should find the high school program continued but more intensively and with a few new features. The personnel director and the personnel bureau are of growing importance in colleges throughout the country.

To sum up: We have pointed out the need for guidance and training. Guidance begins at home. Both guidance and training have a place in elementary school and high school. As one progresses higher to the university and college level, the opportunities increase to fit the individual student into this complex economic world. By training and guidance, we can place the student in a job for which he is suited, and where he is, therefore, a maximal rather than a marginal producer of goods and services. We can thereby help effect stability in the maze of uncertainty and insecurity that characterizes our present life.

Social and Economic Trends

In any well-planned career one should be aware of the nature of the chosen field of work, its future possibilities based on recent trends, and the fitness of the individual personality for the work under consideration. This means that somewhere along the path of the required educational curriculum a fundamental knowledge of various economic, social and political problems should be given. Now we ask the question: Why is not such knowledge made available to the masses of young people? The answer lies in the fact that our educational system has not been planned to that end. This is indicated in the survey made by Dean Zorbaugh.

To her question "Has home helped you gain knowledge of causes of unemployment and of different plans of social and economic organization?"

approximately three-fourths of the replies from college students were in the negative. Regarding aid on these points from the elementary grades, 98 per cent of their replies were unfavorable. As for help from high school on these two points, well over 80 per cent of the college students' replies were in the negative. Help received from college, however, was reported on more favorably—approximately 50 per cent of the college students' replies indicating help received in both respects. The comments of high school students on both points were more kindly than those of college students. Aid from home was acknowledged by approximately 45 per cent of their replies, from the elementary grades by over 10 per cent, from high school by 56 per cent.

Only 14 Per Cent Attend College

The figures above cited are of challenging significance. If only 14 per cent of our youth get to college and if not much more than 50 per cent of this number are conscious of receiving from college knowledge of the two aids, it follows, does it not, that a very small fraction of American youth are informed through the higher educational institutions? Surely, changes are necessary in our university curriculum. If something like 84 per cent of our youth never get even a full high school education by way of formal instruction, the responsibility for attacking this problem would seem to lie with both the high school and the elementary

grades. One is probably safe in saying that not over one-half of the young people who definitely end their formal instruction before reaching high school have by that time become informed regarding the two aids in question. Let us consider separately, as to these two aids, the possibilities of home, grade school,

Early Training Important

Due to the early suggestibility of the immature mind, the elementary grades seem to offer the ideal place to begin an introductory study of economics, sociology and political science. Whatever is done at this early stage should be put on a practi-

Proportion of 96 College Students Replies Indicating Approval and Disapproval Respectively of Home, Elementary Grades, High School and College of Sources of the Aids They Need to Fit Themselves for the Future

Type of aid Ten aids under B	Sources of aid							
	Home		Elementary grades		High school		College	
	Aids received (per cent)	Aids not received (per cent)	Aids received (per cent)	Aids not received (per cent)	Aids received (per cent)	Aids not received (per cent)	Aids received (per cent)	Aids not received (per cent)
Knowledge of:								
Employment trends..... (1)	30	70	4	96	13	87	49	51
Specific occupations..... (2)	29	71	8	92	16	84	56	44
Training for:								
Social amenities..... (3)	70	30	21	79	17	83	53	47
Chosen occupation..... (4)	38	62	5	95	17	83	69	31
Long view and plan..... (5)	66	34	9	91	12	88	55	45
Avocation..... (6)	57	43	17	83	26	74	31	69
Marriage and children..... (7)	45	55	4	96	4	96	24	76
Knowledge of:								
Causes of unemployment, etc..... (8)	21	79	2	98	13	87	49	51
Training for:								
Good of all..... (9)	59	41	37	63	28	72	56	44
Knowledge of:								
Social and economic plans..... (10)	28	72	2	98	19	81	53	47
Other aids (suggested by students)..... (11)	67	33	24	76	21	79	36	64

high school, and college as sources of aid to the maturing student.

The home should be an influence or tool through which young people can broaden and enrich their contacts. But look at the home realistically. Considering how many cases there are of gullibility, political and financial dumbness, and deplorable indifference among people of the present generation, it seems rather hopeless to expect a great deal of help to come from the home.

cal experience basis. Economics, for example, might be shown to involve the prudent use of the pupil's time and money with a view to developing an early ability to discriminate and a sense of relative values. During this same period there might well be a simple objective description of existing institutions with a view to enough analysis to start an appreciation on the part of the child for the major institutions such as the school, the church, the home, and such other

primary groupings as are a part of his experience at this age. There might also be a simple examination of the various forms of government in existence today, noting certain likenesses and differences. Such studies, properly taught, can well be the most vital part of a curriculum designed to prepare children for life.

It is a challenging fact that for four-fifths of our young people high school constitutes the last influence of formal education. To us this means that if we are to have an intelligent, well-instructed population such training as is necessary to this end must not fail to be given in the high school. According to Dean Zorbaugh's survey, however, only 16 per cent of the college students' replies indicated that high school had given aid on the two points in question. Of the high school students' replies, on the other hand, 56 per cent acknowledged such aid from the high school.

High Schools and Politics

The field of political science should be approached in high school from a new viewpoint. Government and politics should not be taught as a lot of corruption or a necessary evil; rather, the ideal politician should be described as an economic and moral statesman, government as a very important and desirable service. I believe every high school student should at some time come into contact with state, county, township, and city officials and the duties of the office each official fills. It is probable that only through such contact will

future citizens gain civic consciousness and assume the responsibilities of true citizenship.

Finally, the high school should make itself an ideal place for study and understanding of existing political organizations. This can be done through historical or political analysis. Russia and Communism, Germany and Nazism, Italy and Fascism, France and Republicanism, the United States as a representative democracy—each should be studied in its proper perspective, showing the place each fulfills in the economic life of the nation in question. The relationship of capitalism to our political organization might well be studied; and understanding of the bases of capitalism could thus be gained. If any of the first three types of political organization above cited should ever supersede our present system it would not be because of a few college students and professors, but rather because the uninformed masses demand a change regardless of the nature of such a change.

Colleges Should Prepare for Life

If not more than about half of our college students are conscious of receiving aid from college relative to causes of unemployment and knowledge of social plans, I need only suggest that the situation is absurd. It looks as if our colleges do not prepare students for life. Our educational system is sadly inadequate if it does not help students prepare to remedy a situation in which available knowledge and information, if put to use by all, would

make possible a solution of our problems in the true light of cause and consequence. Should not at least a study of economics, sociology, and political science be required of every college graduate?

The college or university certainly should bring into the realm of every student's experience a complete knowledge or analysis of all of the various social plans and political organizations. The laboratory method should be used as far as possible. All of such study should be viewed in the perspective of facts applied to life situations. Economics should be made a social and highly practical science. An understanding of it is absolutely essential to an intelligently planned life. It should give one a sense of relative values and at the same time the principles to be applied to practical life situations. Economics, political science, in fact all social sciences—although foreign to most people's experience, form the basis of our living together harmoniously or otherwise. They should become an increasingly vital part of every college curriculum.

Student Sums Up

What we have attempted to do is to present youth's *problems* to your association rather than to offer solutions. We have, however, passed on

to you some of the suggestions Dean Zorbaugh received from students in their answers to the discussionnaire. Perhaps the chief trouble with home and school is that they fail to focus. Hear what one rural high school graduate said: that two weeks spent in a certain Ohio "folk school" gave him more help in sizing up the problems before him and possible solutions of those problems than did all the years of his contact with home, elementary grades and high school.

What was our point of view in this panel discussion? That the purpose of education today is to develop the individual, to meet individual needs according to individual personality traits and capacities. If at times our statements seemed drastic, please recall that honesty and frankness were requested.

We observed during the panel discussion that you deans and visitors were intensely interested and wide awake throughout the two hours. We are therefore encouraged to hope for results. The time and effort we have put on preparation of the panel discussion, and will put on preparing the summary for mimeographing, will have been well spent if what we say proves helpful to you educators in improving your attempts to prepare us youths for the life we must live tomorrow.

Book Reviews

GROUP LEADERSHIP. By Robert D. Leigh. W. W. Norton & Co., Inc., New York, 259 pages. Price \$2.50. Reviewed by John J. Hader.

Discussion leaders and chairmen have for some time been aware that voluntary groups and associations are most urgently in need of a set of psychological rules of order to do for the informal group what Roberts Rules of Order did for formal group procedures.

This book makes steps in that direction but unfortunately devotes most of its effort to the problems of the larger formal group for which Roberts Rules of Order was written. The arrangement of the subject matter leaves, by implication at least, the idea that the conduct of large formal groups is built on a foundation of small group deliberation. This reviewer feels that it is a mistake to assume that a single procedure can be written to fit both types or that one is merely an extension of the other. There is a real qualitative difference in the methods of the small informal and the larger formal group.

It follows, therefore, as an axiom that the larger a group the more formal must its procedures be and formality is only another name for control or restriction of participation. Therefore, the confinement or limitation of participation is the principal function of the chairman

of the formal group. (It is formal by reason of the fact that it is made up of interest groups or elements whose ideas or purposes are already clarified or partially formulated and thus ready for action.)

In the informal group devoted for the most part to "discussion," the function of the chairman is that of encouraging, releasing, guiding, qualifying, augmenting and only occasionally repressing the expression of participants. In the informal group the chairman or leader must be self-effacing and indirect in his techniques and in the formal group he must be self-imposing and direct. It is only rarely that one person has the qualities to be a successful leader of both types of meetings.

Group Leadership is, however, a worthwhile contribution to that growing body of knowledge on the more skillful operation of conferences and official groups.

We need still to explore and invent techniques for the leader or chairman of thinking groups, of how to release certain people and inhibit others; how to shift from an argument between two people to a discussion which progresses from point to point and invites the participation of a larger number of the group. Above all, we need to become aware that most of us still all too frequently

take part in social deliberation for reasons of personal self-assertion rather than for a genuinely objective sense of the group's need.

COOPERATIVE BUSINESS ENTERPRISES OPERATED BY CONSUMERS. A Report of the Domestic Distribution Department Committee. October, 1936, Chamber of Commerce of the United States, Washington, D. C. 34 pp. Single copies sent without charge upon request.

The current interest in consumers cooperative enterprises both here and abroad has been so extensive that publications on the subject are appearing in ever greater volume. This report is interesting in that it is factual, it does now show the co-operatives as an answer to our distribution problems, and it emphasizes the situation in the U. S. rather than in Europe.

The Committee is of the opinion that each form of business enterprise should be open to all including coöperatives but that each should succeed or fail according to its own merit. They are also of the opinion "that it is improper for governmental agencies to extend preferential treatment, as through tax exemptions or financing, to consumers' coöperative enterprises. . . ."

The Committee is handicapped because complete data on consumers' coöperatives in the U. S. is lacking. They are dependent on U. S. Bureau of Labor Statistics figures from 1933 based on a survey in which but 579 of the existing 1800 consumers' co-

operatives reported. What their growth since then has been it is impossible to say, but it is surely a significant factor.

In 1933 the per cent of members in coöperatives to total population in 37 principal countries in Europe and North America, was 3.88. The highest percentage was in the British Isles, 15.97%, the United States showing one of the lowest, 0.56%. Several reasons for this are given. "In England, for instance, domestic trade relative to foreign trade constitutes a much smaller portion of the country's total trade than in the U. S." Monopoly prices on necessities have not been so common in the U. S. as they have in some European countries. The now famous story of the electric light bulb in Sweden is an example. Chain store methods and all retailing methods have been developed to a much greater extent in the U. S. and in the face of keen competition.

Membership of the 579 reporting coöperative organizations amounted to 225,441 at the end of 1933. Total membership for the country is given as 690,000. Of this membership, 34% was in retail store societies and 56% in associations selling gasoline and motor oil. The wholesale enterprises are not extensive and are concerned with general merchandise and gasoline and oil. The manufacturing activities are relatively few and are concerned mainly with poultry and stock feeds and food.

The retail store societies are relatively old, many having been in

existence for over 25 years. The gasoline and oil associations are quite new, almost half of them having been started less than five years (previous to 1933).

The societies had small memberships. Over 40% of those reporting had less than 200 members each and only 38 had 1,000 members or more. There was but a 9.5% increase in total membership from 1929 to 1933 of the societies reporting membership (142).

"The spread of consumers' coöperative establishments has been principally in agricultural states. Within those states the coöperatives' retail stores have been established largely in rural and small urban communities. . . . In many cases the coöperative store in the U. S. is essentially a crossroads institution,—the counterpart of general country stores which were important factors in the distribution system which served the farmer and the country villages during the early development of agriculture in this country. Few consumers coöperatives exist in towns with a population in excess of 10,000 inhabitants.

"For the most part, the coöperatives deal in staple articles. Such commodities as fertilizer, cattle feeds, cement, lumber, gasoline and oil make up the principal items of commerce. Groceries, clothing and automobile supplies are next in importance. Where wearing apparel is handled there is practically complete absence of merchandise involving style factors.

"The Department of Labor, in its 1933 survey, found working hours of employees of consumers' coöperatives in the United States to be long. For all types of enterprise, average hours were 54.0 per week, and for retail store societies 56.1 hours per week. Lowest weekly hours found were in effect in bakeries and miscellaneous enterprises which maintained schedules of 48 hours or less. The lowest weekly hours reported by a single society were 36, found in a gasoline and oil association. On the other hand, one general store society required its employees to work 101½ hours a week. Forty per cent of the societies had a 48-hour week or less, while 28% of the societies required the services of their employees for 10 hours or more a day.

"In the British Isles there are definite connections between trade unions and coöperatives. In some of the coöperative societies it is required that employees of the societies must be members of trade unions, with the result that practically all of the 140,000 coöperative distributive workers are members of labor organizations. This is significant because employees in distributive trades in the British Isles generally are largely unorganized."

The summary of the difficulties facing coöperatives in the United States is significant. In addition to causes of failure faced by any business concern such as inefficient management, lack of patronage, etc., the coöperatives have special problems of their own. The reduction in prices

which they have been able to effect has been slight and does not stand up so well to competition here as in other countries where retailing competition is not so keen and efficient. As they increase their difficulties become even greater. They must meet higher rentals, pay more for management services, enter into more intensive advertising and educational efforts, etc. If foreign countries are taken as examples, one may cite the problem in the British Isles of coöperatives overlapping into each other's territory, and the problem in Sweden of sound and profitable investment of their large surplus funds, and disposition of by-products which cannot be sold within coöperative channels of distribution.

The Committee succeeds very well in showing that coöperatives have no easy road ahead, and that they should and must succeed on their own merits as any other business enterprise does. Their point that consumers' coöperatives should stand on their own merit and not on government subsidy is well taken and is the opinion of many leaders in the coöperative movement itself. That coöperatives have received government discrimination is hown in this report.

THE FRONTIERS OF PUBLIC ADMINISTRATION. By John M. Gaus, Leonard D. White and Marshall E. Dimock. Chicago: The University of Chicago Press, 1936, pp. 146. \$2.00. Reviewed by Herman Feldman.

This little volume by three students of political science and public administration, one of whom, Dr. White, has for some years been a member of the United States Civil Service Commission, consists of seven essays signed by individuals in the group. These reflections are described as having resulted from "the pleasure which the authors have taken in discussing among themselves problems of mutual interest and also their belief that the governmental problems revealed by the depression and the efforts to deal with it require for their solution both improvements in administrative techniques and equally more accurate ideas concerning the nature of administration."

The attempted formulation is a series of analyses aimed at defining broad concepts and horizons, and is thus distinctive from much of the material recently published in the field of governmental operation. The chapters try to define the scope of public administration, the meaning and place of principles, the definition of responsibility, and the rôle of discretion in the exercise of governmental authority; they try to evaluate theories of such administration, and the criteria and objectives to be kept in mind. The result is a stimulating, informative and challenging contribution to the field of public administration. It supplies the kind of thinking which was, in the past, applied mainly to scientific management of private industry and it is likely to prove as significant.

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Motion Picture Companies Pay the Highest Salaries to their Top Executives, Chemical and Drug Companies are Next Highest, then Come Manufacturing Industries and Trade, with Public Utility Salaries Well Down at the Bottom of the List.

Salaries of Executives

By EDWARD L. THORNDIKE and
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WE HAVE examined the S. E. C. reports of salaries paid in past years to the chief officers of over 400 corporations, mostly registered on the New York Stock Exchange, in relation to various features of these corporations.

This analysis revealed the great variability of salaries that exists among even the most similar companies in size and character of work. Certain other facts are also clear and emphatic. (1) Public utility salaries are very low. Top salaries and second salaries are only about three-fifths those of the general run of companies of equal magnitude as measured by a formula (exclusive of railroads and public utilities). (2)

Moving picture salaries are very high. The salaries of our three moving-picture companies are about three times those of other companies of equal magnitude. (3) It also appears that chemical and drug industries pay about one-fifth more than the general run of businesses (exclusive of railroads and public utilities). On figure I we show individual salaries in these industries plotted along with the lines showing the medians for the general run, and also three salaries of moving-picture companies.

In this article we present the facts upon which these conclusions are based, discussing in particular (1) the variability of salaries among

companies of approximately the same size as measured by total assets, gross revenue, and number of employees, (2) the relation of the salary of the president and of the two next highest paid officers to the size of the company among companies doing roughly the same sort of business, and (3) the relation of these salaries

gross revenue or any other single factor is inadequate.

The management of a business by an executive requires him to manage property, to manage production and sales, and to manage personnel in relation to these. Taking these three factors into consideration, we have experimented with different formulae,

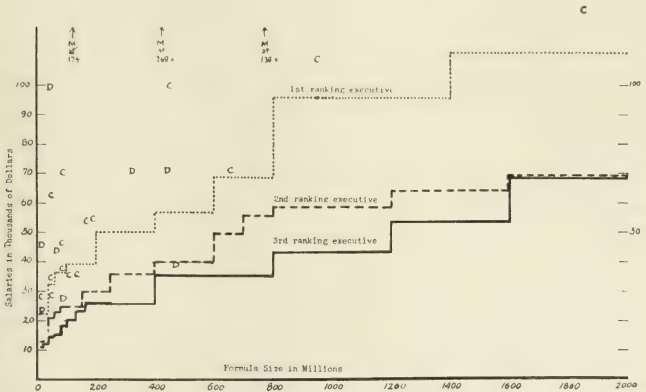


FIG. 1. Median Salaries of 1st, 2nd and 3rd Ranking Executives, in relation to formula size of company. All companies except railroads and public utilities. C's, D's and M's are individual salaries of highest paid officers of chemical, drug and motion picture companies.

to differences in the nature of the business. We shall use here the data for 1935.

Size of Company

In measuring the size of a company from the point of view of the responsibilities of its managing officers, it has seemed to us that total assets or

and have finally developed the following one as being a reasonable measure of the size of a company in its relation to executive responsibilities:

$$\begin{aligned} \text{Size of Company} = & \text{Total Assets in dollars} \\ & + \text{Twice Gross Revenue in dollars} \\ & + 20,000 \text{ times Number of Employees} \end{aligned}$$

or briefly

$$\text{Formula Size} = \text{TA} + 2\text{GR} + 20,000\text{E}$$

For example we may show the use of this formula for companies of two different sizes,

General Motors (1935)

Total Assets.....	1,414,000,000
Gross Receipts.....	1,155,000,000
Number of Employees.....	211,000

Applying the formula we have:

$$\text{TA} = 1,414,000,000$$

$$2\text{GR} = 2,310,000,000$$

$$20000\text{E} = 4,220,000,000$$

$$\text{Formula Size} = 7,944,000,000$$

W. T. Grant Co. (approx.)

Total Assets.....	35,000,000
Gross Sales.....	100,000,000
Number of Employees.....	15,000

Applying the formula we have:

$$\text{TA} = 35,000,000$$

$$2\text{GR} = 200,000,000$$

$$20000\text{E} = 30,000,000$$

$$\text{Formula Size} = 265,000,000$$

On contrasting the formula sizes of these companies, we see in General Motors that the Employees factor contributes over 50% of the total weighting. In view of recent events in the General Motors situation we can well see the importance of this factor as an executive responsibility.

On the other hand, with the W. T. Grant Co., we see a company operating on a very large quick turnover at a very small profit, so that the maintenance of a high gross revenue is the most important job of this company's executives.

These two cases illustrate how our

formula may be applied to widely different forms of business.

Use of Formula

We admit that all such formulae are arbitrary, since we do not know the equations for the abilities required to manage property, manage production and sales, and manage personnel in terms one of another, and that at best they can be only coarse approximations. We further see that the equations, if they could be known, might be very different in different sorts of business. Consider, for example, the management of equal dollar-assets of a holding company, a copper mine, a water power, a railroad, and a factory.

But for our purposes any reasonable combination is useful. It certainly is better than using total assets, or gross receipts, or number of employees alone, when we learn what the general relation of salaries among companies doing the same sort of business is to each of these factors. Whether any other single system of combining these three figures would give better weights than we have used is unknown, and is hard to ascertain.

That formula will be the best which (a) produces the highest correlations between the total size of companies measured by formula in different years, (b) makes the variations in the salaries of corresponding officers in companies of equal total sizes a minimum, and (c) makes the curves of corresponding salaries in relations to total sizes smoothest. We have also

TABLE I

Variations in Size of Salary of Executives of Manufacturing Companies

Average Salary in \$'s	Gross Revenue in Millions of Dollars		Formula Size in Millions			
	8-15	20-25	4-60	60-80	4-6	60-80
	(a)	(b)	(c)	(d)	(e)	(f)
4-5					1	
6-7						
8-9						
10-11					2	1
12-13			1		2	
14-15		1		1	2	3
16-17			1			1
18-19					3	
20-21	1		2		1	1
22-23				1	1	2
24-25	3		1		1	2
26-27	2			1		1
28-29			2			
30-31	2	1		2		1
32-33		1	1	1		1
34-35			3	1	2	
36-37	2	2		1		
38-39						
40-41	1		2			
42-43	1				1	
44-45	2			3		
46-47				1		
48-49		1			1	
50-51	2		1			
52-53	1	1	1		1	
54-55		1				
56-57	2		1			
58-59				1		
60-61		1				
62-63	1		1			
64-65		1				
66-67	1					
68-69						
70		1				
and						
90	1					
100			1			
101		1				
111		1				

tion of our formula we see in Table I the salaries of the presidents of manufacturing companies (a) having gross revenues of 8 to 10 millions, and (b) having gross revenues of 20 to 25 millions. It also shows the highest salary in manufacturing companies whose formula sizes were (c) from 40,000,000 to 60,000,000 and (d) from 60,000,000 to 80,000,000; and also in columns (e) and (f), the next to the highest salary in these same companies.

We see plainly in this table the great variation in salaries of executives. For example in the first column we see in companies of gross revenue between 8 and 10 million dollars that some highest paid officers receive as low as \$20,000 in salary while others receive as high as \$90,000. And so on throughout the whole table.

Our data do not furnish many companies of closely the same magnitude, but by calculation and interpolation we can infer from them what the variations would be in a hundred companies having gross revenues of exactly one million dollars, in a hundred having gross revenues of exactly two million dollars, or in a hundred companies having formula sizes of 5,000,000, 6,000,000, 7,000,000, etc.

Salaries and Services Rendered

Among a hundred companies of the same magnitude, the variation in the amount of the first, second or third salary will be so great that some company will pay about twice

tried other formulae such as $TA + 2GR + 10,000E$, but not exhaustively.

Coming now to the general applica-

as much as the median company of that size, and about four times as much as the company paying least. The range between the 75 percentile company and the 25 percentile company will be about three-fifths of the total salary paid by the median company.

These ratios will be higher for the companies with Gross Revenue under \$20,000,000 and with a formula size under 150,000,000, and lower for the larger companies. The amount of

accurate measures of the services rendered. Custom, inertia, and a certain amount of indifference to pecuniary rewards seem to play important rôles.

Salaries per Million Dollars, G. R.

If one plots the salaries of corresponding officers in companies roughly alike in the nature of their business (such as telephone companies, or companies furnishing electric light and power, or railroads, or chain stores) against total assets or gross revenue or number of employees, the relation between size of company and pay of officers shows great variation. However all groups are similar in showing rapidly diminishing increases in salary with equal additions to assets, receipts, etc.

The median payment to the president per million dollars of gross revenue for manufacturing companies, for example, drops from about \$7000 per million in companies receiving 2 to 4 million annually, to about \$2000 per million in companies receiving 25 to 30 million annually, and to less than \$1000 per million in companies receiving 100 to 150 million annually. The median payment to the next most highly paid officer in the same sets of companies drops from about \$4000 per million dollars of gross revenue in the smallest companies to about \$1000 per million dollars revenue in median sized companies and to about \$500 per million dollars revenue in the largest companies.

Table III presents the facts concern-

TABLE II

Pay of Highest Paid Executive in Relation to Company Size

Salary range in \$1000	Formula Size of Companies (in millions)						
	Less than 4	40-80	80-160	160-300	300-600	600-1000	Over 1000
0-9	2						
10-19	2.1	4	5	2			
20-29	1.4	11	13	3		1	
30-39	9	12	13	5	1		1
40-49	5	6	6	5	5		
50-59		6	5	3	5	1	1
60-69		2	3	3	4	2	2
70-79		1	3	2	3	2	1
80-89			1	1			
90-99			3			1	4
100 and over		1	4	2	3	2	7

variation among the giant companies like U. S. Steel and General Motors cannot be safely inferred. Table II presents an abbreviated summary of the data regarding the pay of the highest paid company officers upon which our inferences are based.

The variations in the salaries of management at these levels cannot easily be explained as the result of close bargaining of companies for ability and of men for financial rewards, nor safely be taken as

ing the relation of size of company and median salary of the most highly paid officer for various groups.

salary to size of company between mining, oil, chain stores, department stores, restaurants, and miscellaneous

TABLE III
The Relation of Top Salary to Size of Company
Median Salaries of Most Highly Paid Officer

Formula Size in Millions	Non-Manufacturing				Manufacturing							Semi Public	
	Oil and Mining	Chain Stores	Dept. Stores	Misc.	Autos and Airplanes	Chemicals	Food Drinks Tobacco	Light Mfg.	Machinery	Metals	Misc.	Rails and Transit	Public Utilities
10-19	23			30		28	30	14	26	15			20
20-29	18	25		39	16		29	28	28	14	18		8
40-59	29	36	42	23	34	35	33	29	25	32	35	52	24
60-79	50	68	144	56	30		14	35	45	33	46	21	15
80-99	35	20	26	38		48	15	34	27	30	90	18	20
100-129	54	33	75	16	25	28	66	50	24	157	18	25	36
130-159					73	78	90	36	39	53	56	40	22
160-199		40		30		55		62	31	60			21
200-249	69	39	29			50	66	19	64	32		30	40
250-299		23		40			76	42	42		62	66	42
300-399	53	37			91				65			18	32
400-499	46	60				100				60			45
500-599	55	50								69			61
600-699		23				72				50		27	41
700-799		110	65						76				46
800-899	100												44
900-999		94				109					60	60	
1000-1099		58										36	66
1100-1119							95		91			49	
1200-1299	139											50	
1300-1399		100								141		60	
1400-1499										94		49	
1500-1599	168												
1600-1699													
1700-1799									54				
1800-1899						126							
1900-1999									96			60	52
2000-2499										203		60	
2500-2999							68						
3000-3999							60						
4000-4999												60	
5000-5999													
6000-7999	125				375								

Using our formula as a measure of the size of a company, we find (as shown in this table) no demonstrable differences in the ratios of size of

business, nor between the different sorts of manufacturing (of airplanes, automobiles, metals, machinery, foods, drugs, tobacco products, etc.).

For this reason we have combined the data from all these. In other words, we have included all the data except those for railroads, public utilities, and moving-picture companies.

Figure 1 shows the median salary of (a) the most highly paid officer, (b) the next to the most highly paid, and (c) the third salary in relation to formula size for all companies except

size. $y = 85 \sqrt[3]{x}$ would fit the beginning of the curve for highest salaries fairly well and the middle of the plateau for companies of 1000 million to 2000 million, and would not be impossible for the three companies with ratings from 2000 to 2500 and with top salaries of \$60,000, \$68,000 and \$203,000, or for the three great companies with ratings from

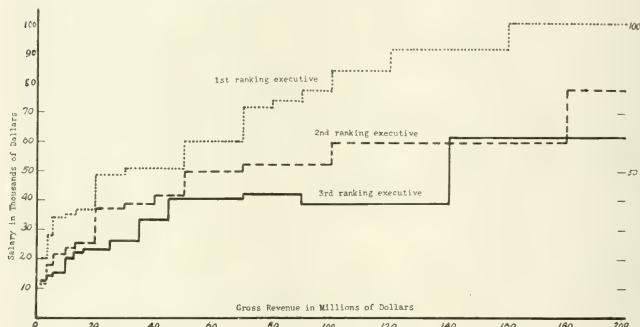


FIG. 2. Median Salaries of 1st, 2nd and 3rd Ranking Executives in relation to Gross Revenue of company. Types of business included; oil, mining, chain stores, department stores, and automobile, airplane, chemical, food, drink, tobacco, machinery, metal and other miscellaneous manufacturing. (See Table III)

railroads and utilities. As salaries in chemical companies and drug companies are higher than for manufacturing generally we also show as c's and d's the top salaries in individual chemical and drug companies (salaries in Figs. 1, 2 and 3 are grouped to favor smoothness of the curves).

It is obvious that no simple mathematical equation can describe the relation between salary and company

size. $y = 85 \sqrt[3]{x}$ would fit the beginning of the curve for highest salaries fairly well and the middle of the plateau for companies of 1000 million to 2000 million, and would not be impossible for the three companies with ratings from 2000 to 2500 and with top salaries of \$60,000, \$68,000 and \$203,000, or for the three great companies with ratings from 6499 to 7959 and with top salaries of \$125,000, \$167,000, and \$375,000. But it would leave a great dip from about 100,000,000 to about 600,000,000 and a too sudden rise thereafter. $y = Cx^{\frac{1}{2.75}}$ might make a better fit, but it also would not be very good. (The line above 1600 to 2000 is a part of a line for 1600-2500.)

The relation for second salaries is more regular than for first, and $y = 58 \sqrt[4]{x}$ is not a bad fit considering the scantiness of the data.

The six largest companies, not included in the diagram, had records as follows:

Formula size in millions	Salary in \$1000
2092	180
2269	54
2458	50
6499	113
7236	125
7949	375

Figure 2 shows similar facts for manufacturing companies only and in rela-

about as the fourth root of $TA + 2GR + 20,000E$.

Nature of the Business

Among companies alike in magnitude one would expect that those, the successful management of which was most difficult in the sense that it required rare combinations of high degrees of valuable abilities, would be best paid. Such would, other things being equal, be enterprises in new fields presenting novel problems, enterprises subject to caprice and fashion, enterprises beset with difficulties in both production and selling,

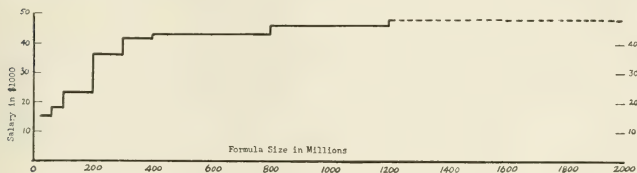


FIG. 3. Median Salaries of most highly paid public utility executives in relation to formula size of company.

tion to gross revenue instead of formula size.

Figure 3 shows the relation of median salary of the highest paid officers to formula size in the case of Public-Utility companies. There can be no doubt from an examination of that Figure that the "negative acceleration" or diminution of salary per unit of size of the company is greater in the public utility companies than in ordinary business concerns. If we leave out of account a salary of \$210,000 for a company of twelve thousand million, the salary rises

and enterprises in which the employees required more than pecuniary inducements to work well, or in which harmonious cooperation of employees was especially important.

So far as they go, the facts we have presented are in harmony with the hypothesis that the wages of management will increase with the difficulty of the task, other things being equal. But the extent and importance of its application are left in doubt.

Among industries of the same size and beset by equal difficulties, certain features of prestige do, or once did,

make banking, wholesale trade, and publishing more estimable than say oil companies, department stores and the manufacture of clothing. Absence of this prestige would probably act to raise the salaries of the latter, but our data do not reveal anything notable in this respect. They point in general toward the weakening and disappearance of such prestige values in the case of the top management of large companies.

The relation of salaries to profits per unit of size, and to profits per unit of money invested in the business is of obvious importance. Our studies of it will be reported later.

Executives of Non-Profit Concerns

Interesting comparisons might be made between the form of these curves and the forms of the salary curve of (a) army and navy officers in

relation to the magnitude of their commands, (b) college presidents in relation to the size of the material plant, teaching staff, and student body, and (c) mayors, superintendents of schools, city engineers, and other municipal officers in relation to the size of the city or other administrative unit.

But this may well wait until more reliable determinations can be made of all the curves in question. At present we do know that the army and navy curves rise even more slowly than the curve for officers in public utility companies. Also our evidence suggests that the curve for the income of the genuine entrepreneur of classical economics, who risks his own funds and is responsible only to himself, rises very rapidly with the magnitude of his operations, perhaps even as some power of the magnitude.

If you Enjoy a Good Laugh Read about
Membership in the Flint Alliance and How
a Letter was Sent to President Roosevelt.

Inside Facts *on* General Motors Strike

By DEPARTMENT OF RESEARCH AND EDUCATION
Federal Council of the Churches of Christ in America

IN 1921 and 1926 the American Federation of Labor and the craft unions composing it made unsuccessful attempts to organize the automobile workers. Another effort was made under the NRA in 1933-1935. Dissension arose over jurisdictional claims and several unions came into existence. Demands arose for an industrial union which would include all classes of workers. Following the struggle over the question of industrial unionism in the A. F. of L. convention of 1934 and 1935 the United Automobile Workers Union (U.A.W.A.) was established and given limited jurisdiction. The union demanded complete jurisdiction and when the Committee for Industrial Organization (C.I.O.) was formed late in 1935 for the purpose of organizing the mass production industries the U.A.W.A. joined it. Since then

it has been conducting a vigorous organizing campaign.

The General Motors strike began with sit-down strikes in Flint in December, 1936. The sit-down strike technique had been previously developed by spontaneous action of employees in other industries. On January 9, 1937, Homer Martin, the president of the union, said "We have never given anybody orders to sit down."

Charges and Counter Charges

The General Motors Corporation declares that the strike was begun without attempts to adjust differences by collective bargaining. The union on December 21, 1936, asked for a conference with the principal officials of the company but was informed by William S. Knudsen, executive vice-president, that it should take up grievances with plant man-

agers. He said on December 31 that grievances could only be handled locally where the managers and employees were familiar with local conditions and "with the basic policies of the corporation concerning employee relations." He said further that the corporation "accepts the principle of collective bargaining and desires to maintain satisfactory relations with all its employees regardless of union or non-union affiliations," adding that the corporation had established a procedure for it on August 15, 1934.

The union, on the other hand, charged that the attitudes and action of the plant managers had made local bargaining ineffective, that hundreds of men had been victimized for union activities, that the company had made extensive use of spies to enable it to practice systematic discrimination against union men, and that men discharged for union activity were blacklisted so that they could not get a job in any other plant. Furthermore, the union insisted that since the corporation's labor policies were made by the higher officials, not by plant managers, they should have a conference with the former to negotiate a corporation-wide agreement.

Union Not to Run Plants

On January 4, 1937, Alfred P. Sloan, Jr., president of the corporation, in a statement to the employees and in a newspaper advertisement declared that the union was asking for a closed shop which would make it necessary for the workers to "pay

tribute to a private group of labor dictators for the privilege of working." He insisted, furthermore, that "the real issue is perfectly clear . . . Will a labor organization run the plants . . . or will the management continue to do so?"

Mr. Martin replied that the union was not asking for a closed shop nor seeking to "run" the plants, but for a conference with the highest officials to discuss the following subjects: the abolition of piece work; the 30-hour week; time and one-half for overtime; a minimum rate of pay; reinstatement of unjustly discharged workers; seniority based on length of service; the speed-up; the recognition of the union as the sole bargaining agency; and joint tribunals for the adjustment of disputes.

By this time sit-down strikes had spread so that they were seriously crippling the company's production. The strike in the glass industry was causing a serious shortage in glass. As a result the company found it necessary to curtail operations and to cancel orders for materials from the many industries serving it. Thus many of the company's 211,000 employees in 35 communities and 14 states were thrown out of work although they were not involved in the strike. An injunction was obtained ordering the strikers to evacuate the plants.

On January 6 the corporation indicated that it would not insist on local bargaining, that it was willing to confer on broad policies but that it would not recognize the union as the

sole bargaining agency nor bargain until the plants were evacuated by the strikers.

Abortive Truce

As the result of the mediation of Governor Murphy of Michigan, where the situation was most critical, a truce was arranged and an agreement arrived at to enter into negotiations on January 18, the plants to be evacuated first. The company promised that it would not remove dies or other equipment from the plants (a provision which the union had insisted on as a safeguard to its bargaining power) nor resume operation of them for a period of 15 days during negotiations. The union promised to evacuate the plants by January 18.

While the evacuation was going on, the workers in three plants having left, Mr. Martin declared that he had received information that a secret agreement had been made by Mr. Knudsen to meet representatives of the Flint Alliance, an organization composed of "loyal workers," business men and other citizens, on January 19. The union regarded this as a breach of faith and an attempt to play one organization against the other and stopped the evacuations. Mr. Knudsen maintained that the corporation all along had insisted that it would bargain with any group of its employes and denied that a meeting with the Alliance had been arranged for any date during the negotiations with the union. The union representatives met the company representatives on January 18

and the company refused to negotiate unless the rest of the plants were evacuated.

Efforts were made without success by Governor Murphy and Frances Perkins, Secretary of Labor, on January 20 to induce the company and the union to agree on a basis of negotiations. Secretary Perkins, using her power to mediate conferred by a law in 1913, invited both parties on January 25 "to attend without condition or prejudice a conference . . . to consider renewal of negotiations." Mr. Sloan declined this invitation to meet with representatives of the union on the ground that the union on January 20 had refused to evacuate the plants unless the company accepted the union as the sole bargaining agency.

The Flint Alliance

Since the negotiations above referred to failed because of the relations of General Motors officials with the new organization known as The Flint Alliance, the origin and nature of that organization are extremely pertinent. Mr. G. E. Boysen, its president, stated in press interviews that the members of the Alliance, which he represents as constituting a majority of General Motors employes in Flint, do not pay dues, but that the organization is financed by the business men of Flint and that its membership is made up of business and professional men and citizens as well as General Motors employes.

A large number of interviews with both non-union and union men in

Flint showed that Alliance membership application cards (business reply cards, postage paid) were distributed in General Motors plants, in some cases to the men as they worked. The inevitable inference was that the corporation had authorized this since it occurred during working hours. In other shops, workers stated, the cards were passed out at the gates by company police. In still other shops the cards were passed out at the doors (inside the gates), on company property. Direct evidence shows that in one case, at least, the men who distributed these cards were given "15 minutes time"—in other words, paid by the corporation for handing them out.

The cards read as follows:

"Membership Card
The Flint Alliance
for the
Security of Our Jobs, Our Homes, and
Our Community

Name

Address

Where employed

Please Fill Out and Mail—Postage is
Prepaid."

In the light of these facts the union officials put the obvious interpretation on the exchange of telegrams between Mr. Boysen and Vice President Knudsen of General Motors, which was widely reported in the press. On Friday, January 15, Mr. Boysen (who, it appears, was formerly a General Motors paymaster) sent a wire to the corporation protesting

against continued suspension of work for the purpose of negotiations in which the "majority of the employees in General Motors plants will not be represented." He urged that all employees be put to work "regardless of affiliation with any labor organization," and called upon the corporation, on behalf of "this great majority of workers" for assurance "that their position will not be overlooked in your dealings with the representatives of this small group."

Mr. Knudsen replied by telegram, promising "to get all men back to work as soon as possible," explaining that delay was due to the "desire to avoid violence," and concluding:

"You may assure your people that General Motors will look after the interests of Flint now as it always has and that no man's right to be represented by whomsoever he chooses will be denied. General Motors will never tolerate domination of its employees by a small minority."

Men Suspect Bad Faith

Mr. Boysen sent another telegram, quoted in the press on January 18, asking officials to confer on January 19 with a committee of the Alliance "on collective bargaining as it affects the great majority of your employees." Mr. Knudsen replied, stating that the corporation was "ready always to discuss with your group, or any group of our employees, any questions without prejudice to any one." He added, "we shall notify you as soon as possible as to time and place for a meeting."

This attitude coupled with evi-

dence that the corporation had co-operated with the Alliance in building up its membership among the employes, gave the officers of the union their ground for suspecting "bad faith." The union had already begun on Sunday to carry out the terms of the truce, sit-down strikers having evacuated the Cadillac and Fleetwood plants in Detroit and the Guide Lamp Plant at Anderson, Ind. The men apparently became alarmed lest their own negotiations with the corporation might be carried on as a matter of form while preparations were made to enter into agreement with the Flint Alliance.

Circulation of Petitions

The corporation in support of the contention that its employes are overwhelmingly satisfied "with present bargaining methods," points particularly to petitions of the employes signed by 29,908 out of 37,800 employes in Flint plants. It is important to note the method by which signatures to these widespread petitions appear to have been obtained. From a large number of personal interviews with non-union as well as union workers in a number of General Motors plants in Flint the following samples will suffice. (Names and plants are omitted.)

....., employed over eight years by General Motors, said petitions, mimeographed sheets with place for signatures, were taken "from man to man by the Works Council representative followed by Foreman I saw the foreman call three

men who refused to sign over to his desk several times until they finally signed."

....., employed over nine years, said that in plant, "the petitions were passed around by Works Council representative who told us to 'read it and sign it.' I replied, 'Well, if I have to sign it anyway, there's no use reading it.'"

....., employed in plant several years, said "I didn't want to sign the petition they passed around but what could I do? I'm past 40 and didn't want to lose my job, so I signed."

....., employed over six years, said that on pay-day, two representatives of the Personnel Department stood looking on and petitions were handed to each one to sign. "I refused—the man said, 'Don't you want to work.'—I said 'I want to work and I don't want to lose my job.' He said 'then why don't you sign it.' . . . My opinion is that nobody would have signed it unless they'd had company men in authority around."

....., employed for a shorter period, refused to sign but man came back and said "You're going to sign it or I'll report you to Foreman". This man finally signed because he was "a young man with children, buying his home." He is now afraid to join the union.

....., employed over ten years, said "the straw-boss's right-hand man passed the petitions. I refused to sign but the second man from me—he's got a family and home and he felt he'd better sign it."

....., employed over 15 years, said "the shop rules forbid passing any petitions so in our department we were told to go up in the toilet and sign. We all felt we had better sign since we thought it was a method to spot union sympathizers. In other departments the petitions were passed openly."

....., employed at plant, said that petitions were passed around, also a

printed letter addressed to President Roosevelt. "The foreman who came around with it said 'You want to work, don't you? Then sign this. All you've got to do is sign it—it will be mailed and everything for you.' "

A copy of this letter was obtained by the investigator. It reads as follows:

"Hon. Franklin D. Roosevelt,
President of the United States
Washington, D. C.
Dear Sir:

In regard to the present General Motors strike.

This strike is being conducted by a minority. It is unjust to the men of the majority who wish to continue their work.

We respectfully ask that you consider the majority and their families and do all in your power to restore normal conditions at the earliest possible moment.

Yours truly,

This letter was introduced and printing costs paid for by the employes of General Motors plants who desire not to be represented by the C. I. O. people.

Postage paid by sender of this letter."

This record of evidence is too eloquent for comment.

Discrimination Against Union Men

Specific testimony was given by employes having years of service to their credit that the management practiced continual discrimination against union men.

....., employed by General Motors since 1930, "was laid off from August until

November last year and was told by Mr. of the Personnel Office that it was because of my union activities. He said I had a good record otherwise."

....., employed several years, said on a recent occasion he was laid off with 15 or 20 others, "all union men. The non-union men were kept. The fellow I worked with was not a union man. He was kept all week but I was laid off." Q. "What makes you think they knew you were a union man?" A. "Just before I was laid off my foreman came around and asked my straw-boss, 'How many union men do you have in here?' The straw-boss replied, 'I don't know. There's a lot of them around here.' The foreman replied, 'I'll bet I could spit on one right from here.' They were standing right behind me."

....., employed over six years, also testified that the company was "against unions." "You never know who you're talking to and don't dare say what you really think."

....., on day shift in plant: "Most of the men are afraid to even talk about a union. I did, at lunch hour. For myself I don't care. My children are now grown up and I can take a chance if I can do something to help the younger workers. But you never know who you're talking to."

Another said, "One way they get rid of a union man is to transfer him to another department. Then the new foreman fires him as inefficient."

Another older employe (non-union) said, "It's always been understood all through the plant that it's as much as your job is worth to even talk union."

Illegal Acts of Corporation

Recent disclosures before a U. S. Senate committee investigating violations of civil liberties showed that the corporation had engaged actively

in espionage through paid outside operatives. The National Labor Relations Board on January 28 petitioned the Circuit Court of Appeals for the Eighth Circuit to vacate a stay issued last July at the instance of the General Motors Corporation preventing the board from holding a hearing on a complaint by Local 25, United Automobile Workers of America, referring to the St. Louis Chevrolet-Fisher Body Assembly Plant. The petition states: "The industrial disputes which the National Labor Relations Board sought to prevent and of which it warned in its June complaint have now occurred. Thousands of employes of these appellants are engaged in a strike.

"Evidence is in the possession of agents of the National Labor Relations Board that the General Motors Corporation and those of its subsidiaries which are appellants herein have for a considerable period engaged in aggravated forms of industrial espionage, threats and coercion, violated the rights of their employes by unlawful searches of their possessions, and unlawfully sought to prevent their employes from joining labor organizations of their own choosing."

Causes of Discontent

Furthermore, many non-union as well as union men, most of whom had signed the petitions under the circumstances described, expressed dissatisfaction with conditions, particularly the speed and high pressure under which they were obliged to work.

A few illustrations may be given here:

....., employed several years. Q. "What is the situation on speed of work?" A. "It's more than you can do. Everybody is dissatisfied." He said one plant was known as "the slaughter house" because of high speed and many accidents.

....., employed over 12 years, said the foremen always reply to complaints on speed "if you can't keep up, we'll get a man that will."

....., employed over 15 years. Q. "What is the quota on your job?" A. "We are expected to do about 3,600 a day (9 hours), making an average of about 400 an hour." Q. "Does that mean that on an average you have about 10 seconds for the inspection of each part?" A. "Yes. Sometimes less than that when the speed is higher." Q. "Just what do you have to do?" A. "I have to pick up the part, turn it over on all sides and look at four or five different places to see whether they are all right and then measure a space with an instrument. If the measurement is not right I have to chalk the part and put it aside and do all this quickly enough to catch the next one from the man ahead of me who keeps right on passing them to me." Q. "How do the workers generally feel about the speed?" A. "Everybody is dissatisfied except a few young fellows who never worked anywhere else and have got the strength to stand it for a few years."

....., long service, said, "For the past two years we have been speeded up more all the time. I can hardly stand it. Nine hours a day with no rest periods."

....., employed several years, said the speed-up was so extreme that "two men on the line last week got so nervous they broke down and cried and had to be sent home."

....., employed over ten years, was reluctant to talk (as were many others). He

said, "If it gets back to them, I'll get fired. . . . It's a terrible nervous strain. I've got to keep up." On one job he makes 115 double motions per minute with his hands (nearly 2 a second). The operation requires close concentration of vision. He works nine hours a day, with no rest period except for lunch.

Many stated that after the general pay increase granted by General Motors November 9, 1936, another speed-up was instituted, giving specific quotas in support of their statements.

Conservative citizens of Flint who were vehemently opposed to the strike said frankly that the speed in some of the plants was an unreasonable strain on the workers, and constituted a real cause of wide dissatisfaction and "ought to be remedied."

Does the Union Represent a Majority?

The question whether the U.A. W.A. actually represents a majority of the workers in General Motors plants is one of the main questions in dispute. It is not one that can be answered satisfactorily by a simple "yes," or "no." From the union's point of view the attitude of workers in a concern which has been so sharply hostile to unionization can not be measured by actual union membership. Obviously, only employees of extraordinary courage could be expected to join a union under constant fear of losing their jobs. It is difficult for outsiders to sense what it means to a man to risk the loss of his job, in order to join a union. Various estimates are given of the number of "sit-downers" at

Flint and in various Detroit plants from 200 to 1,500. The number actually left for any time in a plant, however, is not necessarily indicative of the number of strikers. It has been a considerable task to supply food to the men inside the plants and it planned to leave in some cases only enough to close down the line—also only selected employees "who could take it."

It was reported that a considerable number of union automobile workers from other cities came to Flint to swell the picket lines.

Why Wagner Board Not Called In

The question inevitably arises why the National Labor Relations Law has not been invoked in order to determine the strength of the union. It provides for the holding of impartial elections of representatives for collective bargaining in just such situations as this. Neither side has been eager to invoke the law; the union because, in the existing circumstances it was not sure of its own strength in certain plants (although claiming a majority of the total body of workers); and the corporation because it is not in accord with the principle of majority representation which is written into the law. Indeed, the corporation, as already stated, obtained an injunction restraining the National Labor Relations Board from functioning at St. Louis.

The union maintains that since General Motors is a national unit, any "collective bargaining," to be

equitable, should be with a national labor body. The term "sole bargaining agency" means only that the principle of majority representation shall apply to industrial relations as in a political democracy. The union does not demand the closed shop.

Non-Striking Employees

In Detroit a "Workman's Committee has been formed, which, its chairman told the Federal Council investigator, "represents all of us at Chevrolet Gear and Axle Division—nearly 10,000 men." He said, they held a large mass meeting (on company property) and demanded the reopening of the plant. He said they were trying hard to restrain their members from going up to Flint in force and ejecting the sit-downers. Other mass meetings were reported in other cities and on January 26, a Flint Alliance mass meeting was held which the *I. M. A. News* (plant paper) and press dispatches reported was attended by 9,000 employees. It denounced the union and demanded immediate reopening of the plants. The *I. M. A. News* which states that Flint workers are "most of them completely happy with their jobs" reports the receipt of large numbers of letters from employees expressing "loyalty to the company" and desire to return to work.

Ethics of Sit-In Strikes

The sit-in strike is a new technique in that it involves maintaining possession of the company's property and

holding it against all efforts of the legal owners to possess and operate their plants. It has been contended that the legality of this procedure has yet to be finally determined. However that may be, that it is contrary to all our accepted principles of law and equity would seem to be too plain for argument. The significance of what has happened in Flint and Detroit is this: that when the right of labor to organize and bargain through representatives of its own choosing—a right declared in law and supported by national policy—is denied by owners and managers of industry, labor is likely to adopt extreme measures to obtain that right. Until equity is established illegal procedures almost inevitably result. The sit-in strike is manifestly a dangerous weapon. It can be employed in a wholly tyrannical way by a minority of workers who happen to be in position to tie up a huge concern by taking possession of key plants. In the light of principles repeatedly declared by church bodies and by innumerable civic agencies, the immediate necessity would seem to be a determination by impartial procedure, free from all coercion by the company or the union of what agency the employees of General Motors actually want to represent them.

(Editor's Note. We are obliged to the Editor, Information Service, Federal Council of the Churches of Christ in America for permission to use this material.)

If a Supervisor Rates Nearly Everyone in His Division as Excellent or Very Good Don't Lecture him on Statistics. He May be Right.

Efficiency Ratings

By ROBERT L. HILL

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PERSONNEL workers concerned with obtaining "efficiency," "service", or "performance" ratings are often dissatisfied because the supervisor or other rater, tends to rate almost every employee as "excellent" or "good."

These personnel men usually take it for granted that in rating any group of employees engaged in the same type of work the ratings should be spread widely from poor to excellent, with a majority near the average. In statistical language, they believe that ratings should assume a "normal" distribution.

Any distribution which departs notably from the familiar bell-shape of the normal curve is viewed with suspicion and efforts are made to uncover the cause of the anomaly. If a supervisor fails to maintain the proper average and "spread" in rat-

ing his subordinates, he is apt to be lectured by the personnel officer on the theory of individual differences and the normal curve. It is assumed that any supervisor who rates the performance of nearly all of his employees as "excellent" or "very good" is either unobservant or unwilling to make distinctions that are certain to exist.

Books and articles, in discussing rating scales, usually admonish the person responsible for the rating program that: "The person doing the scoring should be instructed carefully in the usual distribution on the scale" (Hull); or "... information will have to be given them about the statistics of distribution of abilities and the quantitative relationship of differences in abilities" (Bingham and Freyd). Formerly, in the Federal Civil Service, when the rating

program was administered by the Bureau of Efficiency, the circular of instructions recommended that a specified average of 82.5 be maintained and that marks be prorated "up or down as may be necessary to reach the 82.5 per cent average."

Performance and Ability Different

It seems that these expectations are due to a confusion between "*performance*" and "*ability*." We all know that abilities in an unselected group when properly measured do tend to be spread fairly widely about an average, and produce a normal curve when charted. But failure to obtain a result in measures of performance does not necessarily indicate faulty rating or measurement.

It is not proposed to make here a sweeping denunciation of traditional theory and practice in this matter. Probably in most instances a distribution that is more or less normal correctly represents the facts. There are undoubtedly many situations, however, in which ratings based on *performance* (not *ability*) may properly be grouped closely about a single point on the scale.

All employees in a given unit might be accurately rated as "excellent," for example, on the basis of work performed. These situations are particularly apt to occur in governmental service.

A typical sheet of instructions to rating officers in the Federal Civil Service states: "Base your judgments on the employee's *observed work*, not on his supposed capacities or antici-

pated performance." And again: "Compare the qualifications and performance of each employee, *as demonstrated by his work*, with the actual needs of the position.

Work Simple and Easy

There are many situations in which the work is relatively simple and easy, considering the abilities of those performing it, and the volume is moderate. Higher recruiting standards are eliminating those for whom work might be at all difficult. Each employee may do well and that is often all that is required of him. On the basis of performance, therefore, there is no ground for spreading the ratings.

If the work were more complex and greater in volume, individual differences in performance would no doubt appear at once, reflecting underlying differences in ability to perform the work. But the fact remains that extreme division of labor has greatly simplified the tasks of large numbers of workers, and often the load is so distributed that no one is required to extend himself unduly to keep up. This is particularly true in governmental work, which is largely of a routine nature, and where piece-work or speed-up methods are little known. Moreover, there are many situations in which a speed-up system would not be feasible, even if desired. Consider the lighthouse keeper!

An interesting illustration of the fact that simple tasks may fail to reveal individual differences in ability

may be taken from the field of animal psychology. Over a period of years many psychologists performed experiments in which hungry white rats were required to find their way through various types of mazes in order to get food. Although some rats appeared to learn the mazes more quickly than others, their performance was not consistent, and the weight of evidence indicated that there were no significant differences among rats in the ability to run mazes.

Bright and Stupid Rats

Robert C. Tryon, experimenter at the University of California, however, advanced the hypothesis that white rats do differ greatly in the ability to run mazes quickly and with a minimum of errors, but that mazes used by previous experimenters were too simple to reveal these individual differences. Dr. Tryon proceeded to construct long, complex mazes and in a series of brilliant experiments conclusively proved that rats do differ greatly in their ability to run mazes. Previous mazes had been so easy that even the most "stupid" rats (with respect to this ability) had been able to make creditable showings, while the "brighter" rats had not been given an opportunity to demonstrate their superiority. The long, difficult mazes of Tryon gave this opportunity.

Extreme simplification of tasks, coupled with moderate volume and selective recruiting methods, may result in situations analogous to that

faced by rats in a simple maze. The work may not be difficult enough to cause an appreciable spread in performance. Those of least ability may maintain their standard of performance through close application. The supervisor may be impressed by their diligence and give such employees better ratings than he gives those of greater ability who perform equally well with less effort. This may, upon occasion, result in ratings that are inversely correlated with the abilities of those rated, and that are slightly, if at all, correlated with actual performance on the job. The moral of this is that in pursuing a policy of promotion from within, service ratings should be used with discretion.

Specific types of positions in which service ratings may properly be grouped closely about a single point on the rating scale are: all sorts of simple clerical positions, where speed is not an important factor; positions where the primary responsibility is the tending of automatic machines.

The points to look into when a supervisor submits ratings that are closely grouped about a high average are these: Are the duties relatively simple? Is speed relatively unimportant? Is the volume of work moderate? Are recruiting standards high, considering the requirements of the positions? If these questions are answered in the affirmative, a skewed distribution of ratings may be a proper distribution. In such situations, refined ratings based on performance should not be attempted.

If the Eye could only be Educated to
Sit Down when it Cannot Adjust to Bad
Conditions it Would be Much Better Off.

Good Working Conditions *for* Eyes

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TO UNDERSTAND the effects of bad lighting on the eye, one of the most fundamental principles to keep in mind is that the eye is always under a reflex incentive to clear up vision. This incentive is strong, so strong that it is extremely difficult to oppose it successfully by an act of will, or voluntarily to force the eye to make an adjustment detrimental to clear seeing. The eye has grown up under daylight. Under this condition three adjustments have developed, (a) the reaction of the pupil to regulate the amount of light entering the eye and to aid the lens in focusing the light from objects at different distances, (b) accommodation and (c) convergence to bring the object on the principal axis of the lens and the image on the fovea. These conditions are necessary for

the formation of the clearest images by the lens and for the best discrimination of these images by the retina.

These adjustments take place under a sort of triple bond imposed by their common nerve supply. This bond is so strong that if one adjustment takes place the others also take place, unless the power of separating them has been acquired, and even then their separation is accomplished only by great effort and strain. Artificial lighting with its unusual and unfavorable conditions for clear seeing has come late in the history of the race, and the eye has not developed any reactions or adjustments to meet the conditions imposed.

Yet the incentive to clear up seeing remains and leads to adjustments which, if allowed to take place, serve only further to blur rather than to

clear up vision. For example, a change in accommodation, which is a change designed to clear up an image blurred by changing the distance of the object, is in no sense helpful, only harmful for clearing up an image blurred by bad conditions of lighting; yet so long as unclear seeing is present, due either to a blurring of the image or to unfavorable conditions for its clear discrimination by the retina, the eye will strive by the three adjustments at its command to remedy the deficiency.

Eye Strain

This striving to clear up its vision by ineffectual maladjustments is the cause of what is commonly called eye strain, and an important cause of ocular discomfort. The misdirected effort or strain is of no service to vision and leads rapidly to fatigue and exhaustion, to deformities slight in their physical magnitude but great in their functional importance, to inflammations and congestions and to hypertensions and other conditions not found in a healthy eye. Accommodative strain in itself, for example, leads to congestion of the network of blood vessels just in front of and behind the ciliary muscles. The congestion in this danger zone of the eye leads in turn to an increased flow of fluid into the anterior chamber from the blood vessels on the anterior border of the ciliary muscles and into the vitreous chamber from those on the posterior border of these muscles, perhaps also through the products

of the congestion or inflammation to a blocking up of the drainage angle between the iris and the base of the cornea. This tends to produce a disturbance in the normal balance of income and outgo of fluids into the interior of the eye and the evils attending such a disturbance.

Eye strain leads to an unhealthy condition of the eye, exaggerating and aggravating any abnormal tendencies or predispositions already present, lowering its normal recuperative and restorative powers and leading sympathetically to functional disturbances in other parts of the body. Like any other organ of the body, if the eye is to remain healthy or to cure itself of any of its ills, congenital or acquired, it must be put into a situation calling for the healthy exercise of its normal functions.

If the eye could only be educated to lie down under the bad conditions of seeing for which it has no specific corrective adjustment, the cause of vision would be just as well or even better served, and the eye itself would be a great deal better off.

Examination of the Eye

A complete program for light prescribing should have the following features: Tests should be made of the subject's (a) preferred intensity of light, (b) his range of toleration for intensity for comfortable use of his eyes for the work he is most accustomed to do and for different types of work, (c) his susceptibility to glare and (d) his need for color correction. From the results of the

above tests recommendations should be made as to the intensity of light he should use and as to the type of lighting equipment that will best satisfy his needs in this respect, also in respect to protection against glare and harmful coloration of light.

All the above tests can be made very easily and conveniently with an instrument we have called a variable illuminator. (See Arch. Ophthal. 1934, p. 45.) The purpose of this instrument is to provide a means of varying the intensity of illumination in continuous change over a wide range, e.g., 0 to 100 ft-c, without change in the color or composition of the light or in the size, shape or position of the illuminated area. It also provides a means of correcting artificial light to daylight quality.

This instrument may be obtained at a very reasonable price from any of the leading optical companies or through the Better Vision Institute.

Testing for Intensity

In testing the curtains should be drawn and the artificial light turned off. Because of the wide spread of light from the test instrument (140 degrees) general illumination is not needed. The instrument provides a very favorable test condition in relation to the illumination of the surroundings for as the light on the reading page is increased there is a corresponding increase in the amount of light in the surrounding field. This avoids any tendency towards a spotlight effect as the intensity on the test surface is increased and gives a type of illumination similar to that

which would be obtained in a lighting system in which the increase of intensity is produced without an increase in glare from the source.

Three sizes of type on test sheets of unglazed paper are provided, (1) the size ordinarily used in printing books (10-point), (2) the size used for magazines and newspapers (8-point) and (3) the customary fine print used for footnotes, etc. (6-point). The examiner may use anything else about which information is wanted.

The subject should be seated directly in front of the test material at a distance of about 18 inches, or in case of a presbyope at the distance needed for his reading glasses. His eyes should be exposed for 3 minutes to the intensity of illumination on the test surface selected as standard for this purpose. Five ft-c is suggested because it is fairly representative of the amount of light now being used by the people who will be tested. The purpose of the test is to find out whether this is sufficient or how much more should be had. Moreover, we have found very little difference in result when the initial exposure was to 5, 10 and 20 ft-c, when the test was properly given, that is, when the series of intensities presented for the subject's judgment is changed sufficiently slowly to allow the size of pupil and changing sensitivity of the retina to keep pace with the changing amount of light. Except in cases where the eyes have previously been exposed for some time to very high or very low intensities of light, we have found 3 min-

utes of exposure to be long enough to bring the eyes to a practically constant state of sensitivity to the illumination selected as preexposure. In this connection it should be remembered that adaptation to light is very rapid, much more rapid than adaptation to dark. That is, the eye when exposed to light loses sensitivity much faster than it recovers in the dark after an exposure to light.

Comfort Point

The full range of intensity of the instrument should first be run to give the person being tested the experience of the different intensities. Then, beginning below 5 ft-c, the intensity should be increased very slowly in order to give the size of pupil and changing sensitivity of the retina a chance to keep pace with the changing amount of light. The subject should be instructed to report when enough light is had for comfort in reading the test material. This intensity should be recorded and the increase continued very slowly, the subject being asked to report when the intensity is too great for comfort or is beginning to be glaring. The difference between these two points is roughly the favorable range or range of toleration for intensity.

The subject is next instructed to turn the knob on the intensity control and find for himself just what intensity he most prefers. He should be allowed all the time he wants to make this determination. Two results are thus obtained, (a) the favorable range or range of tolera-

tion, and (b) the intensity most preferred. Both of these should be recorded on the prescription or the recommendation made.

The tests for determining the amount of light needed for reading should be made for the three sizes of print in order from largest to smallest, and then be repeated for the largest size in order to minimize the effect of practice. If there is a difference in result the second value should be used.

The favorable range, it has been found, is wider for daylight and for artificial light corrected for color than for uncorrected Mazda light. It is of course wider for eyes insensitive to glare.

Testing for Susceptibility to Glare

Tests for susceptibility to glare should have a place in a program for the general examination of the eye. Like the physical examination in general medicine such a program sustains a broad relationship the details of which need not be gone into here. Glare is of two types, simple glare and veiling glare. Simple glare is a too high brightness in any part of the field of view due to an excessive stimulation of the sensorium by light. Veiling glare is an obscuring of the image on the retina produced either by an overlay of scattered light or by light reflected from the working surface which is not focused. Susceptibility to simple glare depends primarily on the condition of the sensorium; susceptibility to veiling glare, primarily on the condition of

the media of the eye. For example, in certain stages of the development of cataract the scatter of light is so great that in spite of the growing opacity of the lens, the patient may see much better at low illumination than at high. Also after an operation for cataract the condition in which the capsule of the lens is left often causes so much scatter of light as to give a high susceptibility to veiling glare.

Simple Glare

In the test for simple glare with our variable illuminator, the light may be thrown on a mat white surface of good reflecting power such as Hering standard white paper, and of suitable size such as a reading page. This surface is viewed at the reading distance when the test is being made for susceptibility to glare in reading. Another method of testing is to have the subject look at a sheet of diffusing glass positioned 5 or 6 inches in front of the opening of the illuminator. In the latter case the conditions of the test are the same, with the exception that the glare is produced by transmitted light.

The test may be conducted in a dark room or, if that is not available, in a room from which all light is excluded as nearly as possible except that coming from the test instrument. In order to standardize the sensitivity of the eye it should be exposed for 3 minutes to the test field illuminated to some suitable low brightness which should be kept constant from test to test. The light in the test

field should then be varied very gradually from low towards high until the threshold of glare or uncomfortable brightness is reached, due precaution being taken with respect to factors that might influence the constancy of this result. Since size of pupil is an important factor in susceptibility to glare, an artificial pupil should be used in cases where it is desired that this factor should be ruled out. The artificial pupil may be worn in a trial frame; or our device for varying the size of the pupil described in an earlier paper may be used. This latter device is admirable for the purpose. (See Amer. Jour. Ophth., 1932, p. 632.)

In making the test for veiling glare a detail of suitable size, shape and difference from the background may be impressed at the center of the diffusing plate of the variable illuminator. The conditions with reference to amount of light in the room and pre-sensitization or pre-exposure of the eye may be the same as those described in the test for simple glare. Again the light is varied from low towards high until the detail at the center of the field is completely obscured. Then the intensity should be varied below and above this point until the determination is made with certainty of the highest intensity at which the detail is still visible and the lowest intensity at which it disappears. The average of these two points should give a fairly correct and representative value of the threshold of veiling glare.

Composite Test

In the foregoing test, it will be noted, the visibility of the detail to be discriminated is held constant and the intensity of the obscuring or glare-producing light is changed until the threshold of discrimination is obtained. It is obvious that the converse of this principle could also be used, namely, the intensity of the obscuring or glare-producing light could be held constant and the visibility of the detail to be discriminated could be varied until the threshold of visibility was obtained. If the latter principle were used, our variable illuminator or some device provided with a shutter means of changing the intensity could be employed with convenience and advantage to vary the visibility of the detail to be discriminated.

The practical test, considered in relation to light-prescribing, is a composite one which takes into account both simple and veiling glare. We refer to the determination of the upper limit of intensity for comfortable reading, described above under the heading "Testing for Intensity." This test has the further advantage that it is made in the routine procedure of testing for the preferred intensity of light. It will be understood of course that in non-pathologic cases simple glare is the major factor in this determination.

Tests for glare may also be made with our instrument for testing the light sense (See *Amer. Jour. Ophth.*, 1931, p. 275). The method of mak-

ing the test and the instrument will not be described here.

Results.—With the composite test noted above, we have studied (in collaboration with E. F. Lewis) 550 nonpathologic cases ranging in age from 10 to 77 years. A very brief summary of the results obtained may be given here to show the wide range of variability that may be expected in susceptibility to glare in non-pathologic eyes as measured by the upper limit of intensity for comfortable reading a page of ordinary type (8-point), and the important need there is for testing for this susceptibility in relation to the care of the eye.

Upper limits of light intensity for comfortable reading were found as follows:

Foot-candles of light	Percentage of subjects
0-5	1.7
5-10	11.3
10-15	16.5
15-20	20.8
20-30	17.7
30-40	8.0
above 40	14.0

Thus it will be seen that for 13 percent the upper limit of intensity for comfortable reading was less than 10 ft-c; for 14 percent, above 40 ft-c; for 73 percent, between 10 and 40 ft-c; and for 65 percent, between 10 and 30 ft-c. From these data it might be considered that those who have an upper limit of less than 10 ft-c are more than usually sensitive to glare, and of less than 5 ft-c, extremely sensitive; while those who have an

upper limit of more than 30 or 40 ft-c are less than normally sensitive.

Testing for the Need of Color Correction

The purpose of such tests is a determination of a condition which might be called chromophobia or chromoasthenopia,—that is, an unusual susceptibility to discomfort due to color in light. In case of all eyes there is, so far as we know, a preference for light of daylight color. Reasons for this are the greater comfort and efficiency it gives, a lesser tendency to produce both simple and veiling glare, and the higher visibility that is obtained for objects and backgrounds neutral as to color, e.g., black on white. There seems, however, to be no pressing reason for using the test unless the history of a case shows an undue amount of physiological aversion to artificial light, although many are more than willing to bear the expense of color correction for the sake of the additional comfort and benefit it gives.

The particular need for it is acute in those cases where there is a complaint of distress in working under artificial light. In such cases a color test should be used in conjunction with tests for preferred intensity of light and susceptibility to glare in the endeavor to isolate the cause of the trouble.

For one who really needs light prescribing for color, little more is required in the way of a test than to give him a chance to read or work under color-corrected light. For him the benefit is so great that there is no

doubt as to his preference. However, if a more exacting test is wanted, the test for the preferred intensity and range of intensity for comfortable reading or working can be made both for corrected and uncorrected light. Thus the range of intensities used affords the observer ample chance to judge which gives the better results. Or the comparison can be made at equal intensities, for example the preferred intensity for the uncorrected light, or at some other representative intensity. The test should be made with all light as nearly as possible excluded from the room except that coming from the test instrument.

Space might perhaps be allowed here for two examples of benefits obtained by color correction. One is that of a distinguished worker, scholar and teacher around 70 years of age, the acknowledged leader in his field. This man was entirely unable to work at night under ordinary conditions of lighting. So far as was known, there was in his case no pathologic condition of the eyes and no unusual refractive defect. When he had been tested, and the artificial light properly corrected for color, he was according to his own statement able to work if he chose until two or three o'clock in the morning. His own version of the result was that color-corrected light had saved his nights for him.

The other case is that of a well-known editor and journalist around 60 years of age. This man had lost the sight of one eye due to disease and the other was in bad condition. He

had been forbidden to work or read at all under artificial light. His testimony likewise was that color-corrected light saved for him the possibility of working at night. So pleased was he with the result that he had color-corrected light installed all through his house and was, the last time we talked with him, contemplating having it installed in his printing plant, stating that what had given him so great a benefit would, he thought, be good for his employees.

As a final comment on the merits of color-corrected light we may mention some results we have recently obtained with an instrument we devised in 1932. We have called this instrument a Visibility Comparator. Measurements made with it showed in general that given visibilities in Mazda light could be equalled by the use of a much lower intensity of artificial daylight, the amount of this difference varying for a given observer with such factors as the level of intensity used, size of print or other detail, etc.

In the current practice of lighting, the tendency has been to try to increase visibility by increasing intensity of light alone. In this a very serious difficulty is encountered in the glare and ocular discomfort that are apt to be caused by the use of these higher intensities. In case of many eyes this difficulty is very serious in-

deed and often in those cases where increase of visibility is most needed. In this connection the great effectiveness of color-corrected light for increasing visibility should not be overlooked. In fact the best conditions for clear and comfortable seeing must include an optimum combination of intensity of light, color of light and size of detail. We particularly feel the need of stressing the importance of the factor, correctness of color. From the standpoint of the welfare of the eye there is everything to be said for this factor and nothing against it.

Conclusion

Equally important with the formation of the image on the retina is its clear and comfortable discrimination. The provisions for this are the work of the science and art of lighting. In this work group and individual variations and needs must not be overlooked. These needs and variations can be determined only by some plan or program of testing. There is no one better fitted by interest, occupation, opportunity and training to develop this aspect of lighting than the personnel worker. We know one personnel worker who has held this opinion to his own advantage and very much to the advantage of his employers.

A Man may be Considered an Over Excitable Loud-mouthed "Buttinsky" in One Group of Workers, While in Another He may be Considered a "Good Talker" and Credited with "Plenty of Pep".

Temperament Tests *as Personnel Aids*

By GUY W. WADSWORTH, JR.

Los Angeles

PREDICTIVE efficiency in measuring temperament or personality offers many advantages. We note differences in behavior on the job on the part of individuals who appear to be matched in terms of intellect and skill. An apparently able applicant turns out to have a "sour disposition" on the job. Another performs his mechanical duties to perfection, but cannot meet the public. When we deal with these variables even with partial effectiveness, we save expense to the firm, as well as embarrassment to ourselves.

We come to this conclusion from our own recent experiences in using these measures in three ways. (1) We have dealt with over two hundred individual cases of maladjusted employees, and basing recommendations largely upon temperamental

findings, have been successful in aiding 60% (after a period of one year) to "meet their problems." 20% more were credited with "some improvement."

(2) Our use of personality test results in passing upon transfers, and in fitting new employees into groups of older workers has served to reduce the number of instances in which technically well qualified employees fail to "get along."

(3) Dealing with new applicants, test scores alone have identified a number of borderline psychopaths, and a few frankly psychotic individuals.

Is Wider Use Desirable?

Can present psychoneurotic inventories and temperament tests be more

widely used in personnel work to deal with this problem? Are the data they offer conclusive, or merely clues for a more extensive type of investigation? If test findings must be supplemented, what additional information is needed, and how can the personnel man secure it?

In the first place, of course, no one should undertake use of the tests themselves without training in psychology, accompanied by clinical experience. If the personnel man lacks this background, he should secure it, or collaborate with a qualified clinical psychologist. Beyond this point the basic requirements can hardly be stated with finality, but our own experience indicates that the following are at least important:

1. Tests must be selected for trial. This requires basic knowledge of the techniques of test development, and of statistics. Aside from taking into account the size of the group upon which the test was standardized, the qualifications of those who identified the criteria (presence or absence in the original subjects of the traits under measurement) to perform that task should be considered.

2. The test results must be interpreted. This requires familiarity with the implications of technical terminology. There is considerable confusion on this score. The term "neurotic" has been applied to anything from a case of jitters to an advanced psychotic state. The name of a test may imply that it covers a broad classification of behavior, where, in reality, it may measure only a few characteristics within the classification. Knowledge of terms

must be sufficient to distinguish a partial measurement from a comprehensive one.

3. Relating normal behavior to that observed in abnormality (without proceeding on the thesis that "everyone is a bit crazy") is another requirement. Abnormal people enable us to study the normal population, because they present examples of thoroughly normal traits which have been "carried too far." They also furnish an indication of characteristics which frequently operate in combination. Thus in studying a given subject, we can not only seek to confirm or disaffirm possession of a given trait, but also inform ourselves with respect to "associated" traits.

Relation to Social Group

4. The temperamental pattern, once identified, should be considered in terms of the subject's environment and associates on the job. No "type" of temperament, or trait of personality, (unless manifested in psychopathic degree) may be regarded as uniformly "good" or "poor." Much depends upon the acceptability of the worker's temperament to those about him. The same man may be considered a "buttsky," loud-mouthed, and overly excitable in one group, while in another he may be regarded as possessed of "a lively (desirable) interest in everything," be considered a "good conversationalist" and credited with "plenty of pep."

5. The methods of the clinician in accumulating evidence should be adopted, and as a corollary, traits described in lay language should be

related to technical symptomatology. Thus a report that the subject is "conceited," "can't be told anything," "feels abused," "thinks people talk about him" furnishes a series of important symptoms which would tend to confirm a finding of introversion in one of the temperamental tests now in use. Other examples would be "worries all the time," "does too much or too little," "does not plan," describing certain phases of emotionality.

The foregoing requirements assume importance due to problems which are peculiar to the task of diagnosing temperament. No one familiar with the subject through actual use of personality tests and psychoneurotic inventories is apt to consider these devices as accurate as tests which measure a subject's ability to perform a required task.

Results Not Quantitative

Tests of intelligence and of aptitude, for example, offer quantitative comparisons of ability to grasp relationships within a time limit, or differentiate the degrees of skill with which given operations are performed. Temperament tests are not similarly quantitative. In the first place, the subject presumably is revealing what he "is like" in certain particulars, rather than what he can do. In the second place, there are no standards of likes, dislikes, emotional trends, introvert tendencies, etc., which can as yet be expressed in "highs" and "lows" for uniform interpretation.

The clinical psychologist and the

psychiatrist have probably dealt with temperamental problems more extensively than have others. Dealing primarily with conditions of imbalance, they question the subject at length to identify or rule out symptoms which the subject himself can reveal. Knowing that the subject may lack insight, or fail to deal frankly, they also supplement this inquiry by questioning his parents and acquaintances. In addition, they personally observe his behavior, and interpret it from the viewpoint of clinical experience.

Most of the symptomatology covered in temperamental tests has been borrowed from clinical psychology and psychiatry. However, the development of a test merely means use of a uniform approach in the part of the inquiry which involves direct questioning of the subject. Instead of dealing with him orally, he tells us what he can in written material. This may assure more uniformity in the clinical investigation, where the temptation may otherwise be to follow up the "most promising" symptoms in order to shorten the task of diagnosis. On the other hand, a test in no sense takes the place of extensive history taking from others than the subject. In short, when we borrow one phase of the clinician's approach, we should also borrow his code of discounts on the subject's responses, and similarly extend our inquiry.

Current Cynicism

Failure to do this, with resultant inaccuracies, no doubt accounts for

much of the current cynicism with regard to temperamental measurement. Anyone familiar with testing under actual conditions knows that psychological tests are suspect in industry, and that a single "miss" in ten predictions somehow or other "counts more" than do nine "hits." It is obvious that when the personnel man gets into trouble due to over-dependence upon a type of investigation which is, at best, partial, he has asked for it. There is no warrant for pretending that we know all about a subject's temperament because he scores in the "upper quintile of neurotic subjects," or shows "marked emotionality."

Accepting the thesis that scores in personality tests are merely clues for further investigation, how can the personnel man go about securing the additional data he needs? His sources of information vary, depending upon whether he is dealing with applicants for employment or employees already on the payroll.

Checking New Applicants

Unfortunately the avenues of investigation which are open to the clinician are not similarly open to the personnel man. Once it is known that the inquiry has to do with possible employment, former employers, teachers, relatives and friends tend to qualify their observations in such a way as not to "injure the applicant's chances." Letters of reference and even personal interviews may not be any more productive in connection with tempera-

mental study, than they are in checking technical abilities, reasons for layoffs, and so on.

An alternative lies in utilizing the services of outside investigators. In our own case we use a nationally known credit service, where the investigator, in addition to making a routine credit inquiry, uniformly questions former employers and references of the applicant on points of temperamental significance. This is done without relating the inquiry to prospective employment.

Where such information cannot be secured, the personnel man has two choices. He can give the applicant the benefit of any doubt raised by a pronouncedly questionable showing in the personality test, or he can relate that showing to his findings in cases where similar test scores have proven significant. In our own case, while we try to exhaust the possibilities of investigation, there are extremes in personality test scores which have been too often associated with "problem employees" for us to ignore them in dealing with applicants.

Checking Employees on the Payroll

Periodic reports (ratings) required annually, and permitting the supervisors to describe the employees in their own words, furnish considerable information of temperamental significance. In addition more pointed inquiry can be made in cases where promotions, transfers and discharges are being considered. In short, there is no limitation upon

Supervisors' Descriptions of "Paranoid" Traits

Objectionable	Questionable	Acceptable
Arrogance		
Cannot "get along" with people, considers them "unworthy," quick to denounce, show contempt, or hamper others by indirection. Takes up a few people whole-heartedly until they cross him, then "wipes them off his list," tries to "undo" them.	Poor team worker due to inability to give others credit for good ideas. Takes offense if his ideas are modified in the least, tactless, sardonic, tends to "hate" others.	Seeks leadership, accepts patronage from no one, proud of his work, more pleasure in self satisfaction than from approval of others.
Conceit		
Sure that no one is quite as well endowed as he is; fixes on an idea which is "good" principally because he believes in it, defends it because it is his idea, cannot compromise.	Contempt for opinions of others, as they do not proceed from the right source (i.e. his own mind), rejects ideas which are not of his own origin.	Self confident, persistent, does good work due to craving for self-expression, great driving power, willingness to work.
Personalizing Opposition		
Personal interpretation placed on opposition, sure that his ideas are attacked because they are his, cannot conceive of anything being wrong with the ideas themselves.	Deals in personal invectives, progress consists of overcoming those who stand in his way.	Takes reverses to heart, feels he failed to do his idea justice, tries harder.
Argumentativeness		
Has fixed ideas of what is "right," defends "right" contentiously, frequently argues for its own sake, becomes attached to subjects about which he can argue, argues "at drop of a hat," does it in name of "principle."	Hard to convince or change when opinions are once formed, first slant on a new idea remains fixed.	Works with conviction, once "sold" he stays put, defends, crusades, "feels right," "cause is just," a strong partisan.
Suspicion		
Questions other people's motives, thinks "something is behind" anything that happens contrary to his liking, looks for treachery on part of others; thinks they are currying favor when they agree with him.	Wonders at some act of justice on the part of another person; employer is humane only because it is "good business."	Not easily "taken in" by ruses of others, shrewd.
Feelings of Abuse		
Easily "hurt," takes a rule that affects everybody as specially restrictive to himself, sees no justice in "equal treatment" if it affects him, envious, quick to attack the "greed" of others, expects a "kick in the pants."	Tends to "crab" by force of habit, spreads poor morale, "has his say" on new rules, "under-dog attitude," takes pleasure in being "spokesman," "champion," a "sorehead."	Hews to the letter of rules, careful not to offend, will "take orders" to avoid discipline.

investigation of the existing force. The remarks volunteered by supervisors need only to be interpreted, or they can be directly questioned on any specific point.

Aid of Supervisors

The following study of "paranoid" traits shows how clues to temperament are available in the every day language of supervisors. This was compiled from a review of several thousand ratings. The items are in the supervisor's own words, or represent the sense conveyed in longer statements. (See p. 345.)

In the first column we have the traits as reported when they are considered objectionable; in the second column, the traits as reported when considered questionable. In the third column, we have the same traits manifested within acceptable limits. These gradations are, of course, arbitrary, and are included only to illustrate that temperamental traits may be described in various

"degrees." Possession by a given subject of any one of the listed traits may not be significant. But if a man has all or most of the traits to an objectionable or questionable degree, the indication of a paranoid trend is apt to be highly significant.

While far from being perfected devices, our current temperament tests nonetheless do take considerable of the guesswork out of dealing with "personality problems" in the office and factory. They should not be carelessly used. Those who place a gentle trust in scores alone, for instance, without careful follow-up can easily go very wide of the mark. But used carefully and mainly as clues for investigation, temperamental tests are probably one of our best aids in smoothing human relationships on the job. There is every reason to believe that they have now developed to a stage where they may safely be widely used in industry for this purpose.

Book Reviews

LEADERSHIP IN A FREE SOCIETY

By T. N. Whitehead. Cambridge, Mass.: Harvard University Press, 1936, \$3.00

Review by CHARLES S. SLOCOMBE

(By Courtesy of the Editor, Saturday Review of Literature)

A commonly accepted interpretation of the development of the American continent is that restless pioneers moved west and, settling down in groups, formed frontier communities. But the more restless ones could not adjust to the complexities and problems of even small community organization and they, complaining that life had become humdrum, became restless and moved further west into the open country. We have often wondered what has happened to these restless persons since the country has become settled clear to the Pacific coast, and have thought that perhaps a wave of people who cannot stand a humdrum existence has bounced back from the Pacific coast to affect the life of the nation.

Professor Whitehead would perhaps concur with this idea. His central thesis is that there is a dangerous lack of social integration, and that the reactions of workers against the humdrum, uninteresting and arid nature of their lives is increasing this condition.

How Social Groups Form

In the first part of his book is a fascinating description of the ways

in which a group of girls, when left free to do as they pleased, so long as they did a satisfactory amount of work, filled their lives with happiness even while doing humdrum jobs.

One girl unconsciously assumed an unofficial leadership and through the informal conversations and relaxations of rest periods integrated them into a social group. Even the output of the girls became correlated with each other and especially with that of the leader.

Then the management made a change in the working conditions. Immediately there was unhappiness and the whole unconscious and informal social structure was smashed. It started to build up again, with accompanying happiness of the girls, when another change was made. Again crack went the satisfying social grouping that had developed. And so it went on, up and down, up and down in work and happiness as repeated changes were made. (We should say that most of these changes were deliberate, as the whole set up was an experiment.)

Whitehead points out, of course, that the girls were totally unaware and unconscious of their own rela-

tions to the other girls, or to the fact that these relations automatically affected their output. These girls were studied over a five year period.

Means of Social Integration

From the results of this and another study he develops what he calls means of social integration. For this purpose he applies the principles derived from the study of these small groups to larger industrial units and to society as a whole. He shows how a modern industrial company is built up of a series of groups or hierarchies of groups like these. He discusses the tremendous resentment which workers feel when their informal associations of this type are smashed by the unthinking, but perfectly logical, actions of management in introducing changes.

On the other hand, he sees an industrial executive under modern fast changing conditions, as being a man whose job it is to introduce changes, which result in breaking up the associations within which workers attempt to develop a sense of social satisfaction, to take the boredom out of their work. The solution to this apparently impossible problem, Professor Whitehead says, lies in industrial executives understanding and recognizing the informal social structures which their employees instinctively set up and guard jealously. He then suggests that the executives should assume active leadership of these groups, so that in a sense changes would

come from within the groups (a leader being within a group) and appear as visible needs arising out of the group's own activities.

Professor Whitehead's approach is rather theoretical, and at times difficult to understand. One is constantly in doubt as to whether he has arrived at some new and important conclusions, or whether he is just dressing up old ideas in newer and longer phrases. When he explains himself by means of practical illustrations, which he often does, the importance of his work is more evident.

Provocative Theory

From the viewpoint of the reader, who is looking for a much needed scientific interpretation of industrial democracy, to see where it is headed, the book though distinctly stimulating, is not convincing. It is all very well to make an intensive study of five girls, and from that evolve a theory as to how Myron C. Taylor can lead two hundred thousand steel workers. The theory may be provocative of thought, as Professor Whitehead's is, but it does not satisfy. It rather shows the necessity for an extensive study of large scale industrial leadership. For these reasons the book is not likely to have much influence on the thinking of industrial executives, who should be leaders, and to whom it really should be addressed.

Students of sociology and progressive thinkers will find much in it to ponder over and discuss.

ADMINISTRATIVE LABOR LEGISLATION

By John B. Andrews. New York: Harper & Brothers, 1936, pp. 231. \$2.50

Reviewed by HERMAN FELDMAN

This "study of American experience in the delegation of legislative power" admirably fills a long-felt want for a comprehensive yet readable and compact presentation of a subject which is of supreme importance under American conditions of government. Information about it hitherto has been available for the non-specialized student in technical treatises or in scattered and sketchy form. The author, who is secretary of the American Association for Labor Legislation, is himself equipped by a lifetime of study and experience for such a book and he has also had assistance and coöperation from associates and officers in the front rank as legal authorities in this field. The result is a distinctive contribution for which gratitude is due and will for a long time be owing from those in government and in academic activities who have occasion to study or teach the subject.

Although the volume deals with labor legislation, the wider field into which it fits is in the study of those types of commissions and authorities which exercise, within the framework of American constitutional provisions, a combination of executive, legislative and even judicial powers. Such agencies make rules which in practice amount, in large part, to independent exercise of law-making function; they enforce their own

rulings in executive fashion; they hear complaints and decide on the validity of protest, very much like a court of justice; yet under proper provision and handling, they are wholly within the keeping of constitutional principles and are our salvation in the development of effective means of administration of vital public interests. Their experience within various jurisdictions during recent decades is of great importance. Their particular significance in this country arises in the fact that they provide a possibility of modernization and concentration of governmental procedures to overcome serious defects which an artificial separation of powers through rigid constitutional barriers seemed to have fastened upon Governmental activity.

In view of the rapidity with which the States and the Federal Government are taking on new functions and obligations, the failure of citizens to comprehend the true scope and manner of exercising such authority, its values, limitations, and its dangers, will prove an obstacle to effective administration. Everyone who reads this excellent exposition, made the more interesting by a lucid style and exceptionally good typography and format, will feel himself fortunate for having obtained an understanding of this basic development in American government.

THE ANATOMY OF PERSONALITY

By Howard W. Haggard and Clements C. Fry. New York: Harper & Bros., 1936, 357 pp. Illustrated edition \$3.00. Text edition \$2.00

The purposes of the authors in presenting this nontechnical analysis of personality are for the reader to "obtain from it the insight into his own personality that gives the understanding of self which is the first step toward self-improvement; and also the insight into the peculiarities of others which is the first step toward the broad tolerance that gives respect for fellow men."

The authors have chosen to explain personality by a structural analysis dividing personality into physique, i.e. tall, thin men or short stocky men; impulse, i.e. shy, shrinking men or aggressive, virile men; intelligence; temperament, i.e. quickness, moodiness; and the ego, i.e. a man's attitude toward himself and others. Under these five headings the authors discuss personality and build it up as a contractor builds a house of bricks. With the current emphasis on functional analysis rather than structural analysis, this point of view is somewhat disappointing. No less disappointing is the emphasis on "types."

The behavior of people falling into each classification are described systematically and the reader will find a great deal of interest and will doubtless be able to catalog many of his friends under the various types. Although the illustrations used are of abnormal persons, it is concerned

mainly with reasonably normal persons.

The difficulty comes in generalizing from these cases. This difficulty occurs in any "type psychology." Kretchmer's types are carefully listed, for instance, although hopeful psychologists fascinated by the simplicity and objectivity of such an approach to the analysis of personality have experimented with them and have not yet obtained test results that were encouraging.

The exceptions to the rule have proven so numerous that the rule comes to mean little. The thin, tall physique may be idealistic and melancholy in many cases or it may have come to typify such behavior. If you were drawing a caricature of a melancholy idealist you would not be apt to draw a stout, short, ruddy man. Yet how many tall thin men are jolly and realistic. There is therefore very definite limits to the use of such indications for judging people.

Unlike many books on this subject *The Anatomy of Personality* is interesting and easily understood and, although, it does not give a deep insight into the problem of personality or report all the present views on the subject, it emphasizes a greater tolerance and realization of the limits and possibilities of men and women.

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After 38 Years' (1894 to 1932) Experience with Compulsory Arbitration, and 4 Years' (1932 to 1936) Experience with Free Collective Bargaining, New Zealand has Returned to Compulsory Arbitration.

Compulsory Arbitration in New Zealand

Extracted from Report

By E. J. RICHES

International Labor Office

AFTER four years' experience of free collective bargaining, New Zealand has returned to the system of compulsory arbitration of industrial disputes. From March 1932 to May 1936 the jurisdiction of the Arbitration Court was limited to disputes in which women workers were involved and disputes referred to it by the almost unanimous consent of the parties concerned. The submission of disputes to Conciliation Councils was still compulsory, but with the exceptions noted, if conciliation failed, no outside authority could intervene. By the Industrial Conciliation and Arbitration Amendment Act of 8 June 1936, the obligation to submit to Conciliation Councils all disputes between registered organizations of employers and workers is maintained, but if no agreement

is reached, the Arbitration Court must determine the points at issue. In addition, the Court is charged with new and heavy responsibilities.

The new law is the outcome of a change of Government. The 1932 amendment, which severely restricted the compulsory powers of the Court, was the work of a Coalition (Liberal and Conservative) Government and conformed closely to the proposals made by the chief employers' organization. Its main purpose was to facilitate the downward revision of wages and working conditions which, in the opinion of its sponsors, was essential if industry was to overcome the difficulties of depression and falling prices. From the point of view of the workers, the effect of the amendment was to remove a safeguard on which they had long de-

pendent and to do so, moreover, at a time when depression and unemployment had so weakened the trade unions that effective opposition to wage cuts was impossible. The smaller unions, whose dependence on the Court had been greatest, were the most seriously affected, but even the strongest unions, whose enthusiasm for the Court had been less marked, were equally opposed to the manner and timing of the change. The resentment thus aroused was strong and persistent. It was not surprising, in the circumstances, that one of the earliest acts of New Zealand's first Labour Government should be to restore and extend the powers of the Court.

The New Law

The main provisions of the Act of 1936 are concerned with the fixing of a basic wage, the scope and membership of trade unions, the powers of the Arbitration Court and the forty-hour week. In the following paragraphs these provisions and certain others worthy of note are summarized.

Under the provisions relating to basic rates of wages the Arbitration Court is required to fix by general order a basic rate for adult male workers employed in any industry to which any award or industrial agreement relates and a separate basic rate for adult female workers so employed. *The basic rate for male workers must be sufficient to enable a man to maintain a wife and three children "in a fair and reasonable standard of comfort."* In

fixing the basic rates, which may be amended at intervals of not less than six months, the Court shall have regard to the general economic and financial conditions affecting trade and industry in New Zealand and to the cost of living. Whatever rates may have been fixed in awards or agreements, no adult male or female worker, unless in possession of a permit issued by the Court, in any industry covered by an award or agreement, may receive less than the current basic rates.

There are a number of important provisions affecting industrial unions of employers or workers.

Registration of Unions

There is a provision that no industrial union may be registered, except with the concurrence of the Minister of Labour, if there already exists for the same industry in the same industrial district either a registered industrial union or a trade union registered (under the Trade Unions Act, 1908) before 1 May 1936.

Provision is made for the registration of a national New Zealand union covering the whole of any industry or related industries throughout the Dominion in cases where the society applying for registration has branches with not less than a specified membership (3 employers or 15 workers) in at least four of the industrial districts (at present eight in number) into which the country is divided. Where registered local unions are already in existence in the industry or industries concerned no society

may be registered as a national union unless either all the existing local unions or a majority of their members are in favour of such registration. On the registration of a national union the registration of every existing local union will be cancelled unless the Minister of Labour, having satisfied himself that a majority of the members of any union desire that its registration be continued, decides to that effect. When a national union has been registered no new union may be registered for the same industry or industries unless not less than two-thirds of all employers or workers in the area to which the application relates are members of a society applying for registration.

Compulsory Membership

A further section of the Act requires *all workers who are subject to any award or industrial agreement to be members of a union*. Every award or agreement made after the passing of the Act must contain a provision making it unlawful to employ in the industry concerned any adult who is not a member of an industrial union bound by it or of a trade union registered before 1 May 1936 and similarly bound. For the purpose of this provision the term adult includes any person of 18 years or over or in receipt of the minimum rate of wages prescribed for adult workers by any award or agreement. No union, unless its maximum membership is fixed by the Court and is already reached, may refuse to accept as a

member any person obliged by this provision to become a member. Any person debarred by this provision from membership of a limited union may be employed if no member of the union is available and willing to perform the particular work to be done. Any other non-unionist may be continued in employment during such time as no member of a union bound by the relevant award or agreement is available and willing to do the work in question.

Union subscriptions are the subject of a provision limiting them to rs. (25¢) per week except in cases where a higher rate is fixed by a union meeting of which written notice, stating that one of the purposes of the meeting is to raise subscriptions above that rate, is given at least seven days in advance to every member.

Arbitration Court

The third main subject dealt with by the recent Act is the jurisdiction of the Arbitration Court. It restores to the Court the jurisdiction in relation to industrial disputes which it had prior to the 1932 amendment, and provides in particular that if no settlement or recommendation is made by a Conciliation Council the dispute in question shall be referred to the Court for settlement. The definition of "industrial matters" includes all matters affecting the privileges, rights and duties of industrial unions or associations and their officers. The Court is authorized to extend an award so as to join and

bind as party thereto any trade union, industrial union or association, or employer in the same industry; repeals the proviso limiting this power to awards relating to a trade or manufacture the products of which enter into competition with those manufactured in another industrial district and in which a majority of the employers and unions of workers are bound by the award; and limits the proviso to a provision that the Court shall not extend an award to cover any employer unless a majority of the employers in the district who are engaged in the industry to which it relates are already bound by it.

40 Hour Week

The Court is directed to fix maximum hours (exclusive of overtime) of not more than 40 per week unless in the opinion of the Court it would be impracticable to carry on efficiently any industry to which the award relates if hours were so limited. It is empowered to amend existing awards or industrial agreements so as to fix maximum hours at 40, or if that is considered impracticable at a figure intermediate between 40 and the previous maximum.

Where an existing award or agreement is amended so as to reduce maximum hours of work "any rates of pay fixed in the award or agreement shall, if necessary, be increased, either directly by the Court or indirectly by the operation of the order, so that *the ordinary rate of weekly wages of any worker bound by the award or*

agreement shall not be reduced by reason of the reduction made in the number of his working hours."

The Act contains, finally, certain provisions relating to administration and enforcement, one of which confers on Inspectors of Awards the power to recover arrears of wages on behalf of a worker subject to an award or industrial agreement.

New Wage Basis

Precedents for the basic wage provisions are to be found in Australian practice and in experience during the early postwar years in New Zealand. In Australia the Commonwealth Arbitration Court and various State wage tribunals have for many years fixed a basic or living wage for the unskilled worker, adjusting its level from time to time in accordance with variations in the cost of living. Such adjustments take effect at once either generally or through a provision in awards making the basic rate subject to periodical revision according to changes in the cost of living. The Commonwealth Arbitration Court and, to a large extent, the State Courts and Boards, have followed closely the standard first set in 1907 in the famous Harvester judgment. *In this case the living wage was fixed by Mr. Justice Higgins on the basis of "the normal needs of the average employee, regarded as a human being living in a civilized community" and maintaining a "household of about five persons."*

The practice of the New Zealand Court has varied at different times. When first established it fixed a "fair

wage" based on what was already being paid elsewhere for similar work. In 1907 it introduced the principle of the "living wage," but without attempting to define the content or the method of calculation of the living wage. The basis adopted was apparently the Harvester standard.

An Act of 1918 empowered the Court to issue at regular periods proclamations altering the wage level throughout all trades. The Court did so by fixing three basic rates, for unskilled, semi-skilled, and skilled workers, and by proclaiming every six months a bonus based on movements in the index numbers of retail prices. The bonuses were added to the basic rates and went into effect immediately after proclamation.

From 1922 on the Court had no power to amend rates during the currency of awards without the consent of all parties thereto.

In 1931, the Court was empowered by special legislation to amend, by general order, the rates of wages both in awards and in industrial agreements. In doing so it was directed to take into account the economic and financial conditions affecting trade and industry. Only one general order was made, providing for a general reduction of 10 per cent in wage rates.

Wages Fixed by Family Size

The basic wage provisions in the Act recently passed is the first time that the Court has been specifically directed to fix "basic rates" appli-

cable to all workers covered by awards and agreements, and it is the first time that the law has specified the size of family (man, wife and three children) which the Court is to take into account in fixing wages.

Preference to Unionists

The original Industrial Conciliation and Arbitration Act of 1894 bore the sub-title "An Act for the Encouragement of Trade Unions," and its framer attached considerable importance to this aim. In the 1936 amendment a similar intention is evident. It is the policy of the Government to have working conditions fixed by negotiation between organized workers and employers and it is considered reasonable to require all workers to bear their share of the cost and responsibility of giving effect to this policy. Preference to unionists, which the Court formerly could but did not invariably choose to grant, is made compulsory. Now a non-unionist may be employed only if no member of a union is "available . . . ready and willing."

Moreover the customary preference clause limited union subscriptions to not more than 1s. (usually 6d.) per week. In future the amount of union subscriptions is to be determined by the union alone, according to a prescribed procedure. As a result of these changes both the membership and the financial strength of the unions will, it is expected, be greatly increased. Of scarcely less importance is the provision for registration of New Zealand unions (i.e. unions

covering the whole of the country). The new law makes it possible for unions to register and to seek national awards. The provisions of the Act designed to limit undue multiplication of unions and to safeguard the position of existing unions registered under the Trade Unions Act are also important; and the section authorizing the Court to give union officials the right to inspect an employer's premises illustrates the Government's intention to enforce recognition of the function of workers' organizations in negotiating and policing collective agreements governing conditions of work. Most employers have in the past authorized such visits as a matter of courtesy and good industrial relations. In future those who are not prepared voluntarily to admit union officials may be compelled to do so.

The sections of the Act providing for the 40-hour, five-day, week give satisfaction to a claim which has been put forward with increasing insistence by the trade unions in recent years, and which finds its inspiration partly in the special circumstances of the depression and partly in the movement in other countries and at the International Labour Conference in favour of the shorter working week.

Exemptions from 40 Hour Limit

Under the new law, the onus of proving that it would be impracticable to carry on efficiently any industry if hours were limited to 40 lies with the employers concerned; and

the final decision rests with the Arbitration Court. The Court may not, however, extend hours beyond 44 per week in the case of any workers for whom that maximum is prescribed in the Factories Amendment Act, 1936, or the Shops and Offices Amendment Act, 1936. The Minister of Labour, in introducing the Bill, recognized that there were "perhaps a few industries" in which it would be difficult to apply the 40-hour week, but expressed the opinion that "in most industries the principle can and should be applied. . . . Wherever practicable, the Court must concede the forty-hour week." The Court must decide whether only technical factors are to be taken into account in assessing impracticability, or whether other factors, and in particular financial difficulties, should be considered; if the latter, what degree of financial hardship would render the conduct of a business impracticable.

Working of the New Law

There has been considerable activity in recent months in the field of industrial negotiations. Already in 1934 and 1935 increasing business activity following on a rise in the prices of New Zealand's exports had led to a reduction in unemployment and an improvement in wage rates. Moreover, even before the passage of the Industrial Conciliation and Arbitration Amendment Act, the advent of a Labour Government pledged to reinstate compulsory arbitration and to restore wages to their 1931

level had added to the forces favouring the trade unions in collective bargaining and had increased the willingness of employers to concede improved conditions. The passage of the Act was followed immediately by a move on the part of many unions to secure awards or to revise existing awards and agreements.

In addition to the maintenance of weekly wages with reduced hours increases in wages have been conceded by agreements or awarded by the Court in several industries.

Court Deals with Major Issues

As was the case up to 1932, the provision that unsettled disputes are automatically referred to the Court has ensured that in practice the major questions of hours and wages have usually been left to it to determine. In general the Court expects the members of a Conciliation Council, who are experts in the problems of their industry, to settle technical questions among themselves; and in fact the detailed conditions of work have usually been dealt with in this way. Wages, hours, over-time rates and holidays are, however, matters which the Court normally expects to be called on to decide, and since neither party will accept less than it thinks the Court likely to award such matters have generally been left to the Court. The Court, which for four years had played a minor rôle, has thus again become the authority responsible for regulating wages and conditions of employment throughout a large part of New Zealand industry.

In the process the tendency towards standardization of conditions seems likely, as a result of the increase in the work of the Court and the provisions of the new law encouraging larger associations of workers, to be strengthened. In an important statement during the hearing of a recent case the President of the Court, Mr. Justice Page, mentioned that the Court found itself very much pressed for time, and expressed the opinion that the more awards were combined together the simpler the work would become for all those interested. Generally speaking, the Court considered, one award in an industry was better than two, and where practicable the Court favoured Dominion awards.

In the majority of cases so far decided the 40-hour week was awarded, with maintenance of weekly wage rates, but in a number of important trades and industries it was held to be impracticable and a 44-hour or even longer week was authorized. Saturday work and longer unbroken working periods were also allowed in several cases. Altogether, as a result of extensions of hours allowed by the Court and exemptions provided for in the Factories Amendment Act and later Orders in Council, at least one-third of all workers in factories are estimated to have been exempted from the general limit of 40 hours fixed by law. The grounds on which extensions of hours were allowed by the Court included the length of the processes involved, the pressure of oversea competition, the limits imposed on producers by gov-

ernmental price control, the perishable nature of the product, established shopping habits and the daily needs of the general public, and the exigencies of related industries. Seasonal variations in activity in certain industries were allowed for by fixing a 44-hour week during the busy half of the year and a 36-hour week (in a few cases 40 hours) for the remaining months.

Dissatisfaction with the Court's decisions granting exemption from the 40-hour week was expressed by a number of the trade unions affected. In reply, the Minister of Labour, while pointing out that the 40-hour week was still in an experimental stage and could not be applied universally all at once, added: "When the Arbitration Court has finished its work, say in a year's time, if any industries have been refused the 40-hour week that ought to have received it, that can be remedied by Act of Parliament without reference to the Court."

No Profiteering Allowed

Reductions in weekly hours of work, together with the maintenance or raising of weekly wage rates, involved increases in labour costs for which increasing volume of production could offer in most cases only partial compensation. Some increase in the prices of commodities was therefore inevitable. The Government was, however, anxious to prevent prices rising to such an extent as to deprive wage earners of the benefit of higher money wages. To

check the rise a Prevention of Profiteering Act was passed. This Act, approved 12 August 1936, provides for the establishment of Judicial Tribunals for the Prevention of Profiteering empowered to determine whether any increase in the price of an article above its "basic price" is unreasonable; and the basic price is defined as the lower of (a) the current price at which on 1 June 1936 goods of the same nature and quality were saleable in the same locality if sold in the same quantity and on the same terms as to payment, delivery and otherwise; or (b) the actual price at which such goods were sold or offered for sale under the same conditions. In determining whether any increase above the basic price is unreasonable regard must be had to any increase in the expenses of a defendant consequent on any amendment of the law relating to wages or working hours, and to any actual or prospective increase in the demand for the goods or services he supplies, due to the increased purchasing power of persons requiring such goods or services. Heavy penalties are fixed for profiteering. The appointment of a Magistrate to preside over a tribunal set up under the provisions of the Act was announced in September 1936.

The requirement that no adult worker be paid less than the basic wage has been criticized on the ground that it makes employers unwilling to engage youths of 18 or 19 years who have had no previous experience. It has accordingly been

suggested that a special exemption from the basic wage provision should be granted for all classes of learners whose training is not complete when they reach the age of 21. An alternative suggestion is that the school-leaving age should be raised. It may, however, be noted that the Act itself provides for the issue of permits to work for less than the basic rate of wages; and the Minister of Labour has stated that it was not his intention that the basic wage should apply to apprentices.

The passage of the 1936 Act making preference of employment to unionists compulsory was followed by an immediate increase in the membership of existing unions and by the formation of a large number of new unions. Statistics of membership are not yet available but there have been numerous press reports of increases in the membership of individual unions.

Company Unions Barred

In certain cases a number of unions have been amalgamated. For example, in Wellington five unions of shop managers and assistants including about 5,000 members were brought together into the Amalgamated Society of Shop Assistants.

In the case of certain industries efforts were made to preserve the independence of small groups or to evade the compulsory unionism provisions of the law by forming "guilds" which could register agreements under the Labour Disputes Investigation Act. The formation of such guilds was, however, opposed by existing

unions, which alleged that they were really company unions inspired by employers, and by the Minister of Labour who threatened to introduce special legislation to prevent any evasion of the Industrial Conciliation and Arbitration Act; and applications from certain guilds for registration under the Act were refused.

Union Responsibility

The problem of a national trade union organization has again been raised and proposals have been advanced for an annual trade union congress at which all unions would be represented and a trade union congress general council on the lines of the corresponding organizations in Great Britain. Plans for a conference of union delegates for the purpose of forming a national organization were announced in July 1936 by the secretary of one of the two principal existing organizations, the Trades and Labour Councils Federation. As a first step, the formation of national unions on an industrial basis has been suggested. The view has also been put forward that the advent of a Labour Government involves a change in the functions of trade unions. "*While the fight for good wages and good conditions of employment is still the main work of the trade unions, their true function and duty,*" it is suggested, "*will not be fulfilled until they become co-operators with the Government in the production and distribution of goods, in the development of the country and in rendering such other services as may be required by the community.*"

For the future working of the arbitration system none of the developments at present taking place is likely to be more important than the growth of the trade unions. If to the increase in their numbers and membership is added the successful establishment of a unified national organization, the resulting increase in trade union bargaining power may change the whole character of the arbitration system. If, on the other hand, small-scale unco-ordinated unions remain the typical form of industrial labour organization in New Zealand, the working of the system may be expected to differ but little in essentials from the practice of the past.

It will be some time before any appraisal can be made of the working of the new law, but it is clear that its main provisions are already widely

applied. The 40-hour, five-day, week is in operation over a large part of industry, basic wage rates have been fixed for men and women workers, and the numbers and membership of trade unions have greatly increased. When it is remembered that this law is accompanied or is about to be followed by far-reaching enactments concerning working conditions in factories, shops and offices, the restoration of wage reductions, farm wages and conditions of labour, pensions, unemployment relief and workers' compensation, it is evident that New Zealand has entered upon a period of social legislation comparable with that which a generation ago attracted the attention of the world.

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In Future More Attention will be Focussed on Medical Examinations, Nursing, Nutritional and Institutional Care, Health Education and Supervision, and Better Follow-up of Sickness and Accident Cases.

Neurological Medicine in Industry

By FOSTER KENNEDY, M.D., F.R.S.E.

Cornell University Medical College

WE NOTE during recent years a decided change in industrial medical service. When employers first felt their responsibility for their workers' health they attended strictly to the "environmental state"; this newer era is concerned chiefly with individual or personal welfare. Employers have come to see that their employees' health is important to them because of the definite relation between health, performance and efficiency, and the occurrence of accident. This is particularly true since the coming of Workmen's Compensation Acts. Dr. Bristol, Chief Medical Officer, American Telephone and Telegraph Company has aptly distinguished the earlier period, "the era of sanitation" from the later development, which he calls "the era of personal hygiene."

There can be no supervision of personal health without physical examination. How novel is such a notion? Rector, early in 1920 writing of an investigation made by the Conference Board of Physicians in Industry, stated that 100 questionnaires sent to industrial establishments, brought responses from 56. Of these, 22 establishments made no physical examinations of their employees. Yet some plants examined applicants for employment in 1900. At that time placing a restriction on the employment of defective workers was based on the fact that they were a menace to themselves, to others, and to property. Physical defects, such as hernia, amputation of arm or leg, loss of vision of one or both eyes, defective vision, cardiac disease, venereal disease, contagious or infectious dis-

cases, kidney disease, tuberculosis, deformity, physical debility, deafness, varicosities and defective mentality disqualified, while other defects permitted limited employment. The average percentage of rejected applicants for employment was only 4.6 and, by eliminating certain special cases, became 2.8.

Over 600 Approved Medical Departments

Early in 1935, Newquist reported on the Four Years' Survey by the American College of Surgeons, covering the medical departments of 1,122 industrial plants. Of this number 55 per cent were granted approval because they complied with the minimum standards for medical service in industry, as formulated by the College. The most common deficiency lay in inadequate medical or surgical supervision of health plans for employees, and of plant sanitation. In other words, it is now held that skillful repair of industrial injuries is not enough. To prevent them is better. Good medical service is less expensive than the cost of disabilities.

New emphasis on the physical and mental condition of the industrial worker means that in future more attention must be focussed on (1) various types of medical examination, both preemployment and periodic; (2) seeing that the employee gets the right type of medical, nursing, nutritional and institutional care that he or she may require; (3) adequate health and safety education of the individual worker; (4) personal

health supervision, somewhat analogous to the very efficient safety supervision that has become a part of all enlightened industrial policies and practices, and (5) better follow up and supervision of sickness and accident cases.

Macy's Experience

Mr. Lawton, Personnel Director of R. H. Macy & Co. has written a comprehensive discussion of preemployment physical examination from the point of view of management. He emphasizes the advantages of proper physical selection in respect to its effect upon the individual, upon the organization, upon the fellow worker and, in such a large organization, upon society in general. He claims that because during the past nine years his Company has rejected many applicants for physical unfitness, this has without question been a considerable factor in "job success" and improved health and accident records. Special precautions are used in examining candidates for certain types of work, such as food handlers, etc.

Labor Viewpoint

It is difficult to estimate what percentage of workers object to physical examinations; some say the number is negligible, and again, labor may not find them to their taste. Macy's, as a result of their experience have formulated a definite policy of protecting the individual against the misuse of the confidential arrangement between patient and doctor.

This is essential if the fears of workers are to be allayed, for Woll has discussed these preemployment examinations from the point of view of labor. He says that periodical examinations have excited the fears and aroused the opposition of labor because the practice has been found detrimental to the future economic security of many wage earners. He acknowledges that some logical system of preemployment examination is badly needed in industry, but says that so far our nation has not formulated a workable plan or system for its operation.

Daily observation and periodic inspection of employees by group supervisors have been suggested by some investigators of industrial problems. However, preemployment physical examination is the first and most essential move. Afterwards it is very valuable to have superiors observe any signs of apparent ill health, and bring such cases to the attention of the Company physician.

The chief objects and advantages of physical examinations as summarized by the National Safety Council, are

(1) To aid in placing the worker in the occupation which suits him best.

(2) To detect the presence of remediable physical defects in order to enable the worker to correct them.

(3) To determine the presence or absence of serious organic disease, which may have an important bearing on employment selection.

(4) To prevent occupational disease by excluding susceptible workers from specific hazards.

(5) To prevent the spread of communicable disease by the exclusion of infected persons. Relative to this, it might be stressed that tuberculosis still is a leading cause of sickness among industrial workers, particularly of younger age groups.

The Council states: "Protection for the worker, the fellow workers and the industry are the chief motives which should actuate the inauguration of this important industrial health measure. Physical examinations should never be made solely with the idea of weeding out the unfit."

Future Needs

It is suggested that the greatest needs in the further extension of physical examinations of applicants for employment are:

(1) The development of suitable standardized methods, based on minimum requirements for acceptance in different occupational classifications.

(2) The adoption of standard forms or record cards for use in such examinations.

(3) Adequate follow-up to insure the highest possible number of corrections of defects and abnormal conditions found.

The examining physicians of some plants have reported interesting results. Among these are that physical examinations increase efficiency, result in fewer accidents, lessen absence and labor turnover, eliminate tuberculosis from the plant, reduce the number of venereal disease cases, eliminate other infectious and con-

tagious diseases, make for better adaptation of workers to their jobs, reduce compensation claims, give a clear record of impaired joint function, save useless litigations, increase the number of days at work, and satisfy employees that their interests are being safeguarded. Where physical examination has been given a fair trial, it has proved of value. Perhaps the chief value is that as a result of a physical examination, the worker is more likely to be properly placed; and becomes a satisfied worker. Knowing the physical requirements of the work which the applicant can do and having a record of his physical condition, the industrial physician is equipped to assist in adapting the employee to his work. If this be properly done, both the employer and employee are better protected, greater contentment results, and lessened labor turnover and greater production should follow.

Mental Health

Accidents are symptoms of the maladjustment of workers to their jobs. And according to competent authorities, at least 85 or 90 per cent of all accidents have as their proximate causes the mental conditions of workers. Lack of knowledge, inattention, confusion are mental conditions that play a part in errors; these in turn depending upon other factors such as experience, training, worry, fear, fatigue, exhilaration or mental subnormality, which expose the worker to hazards. However serv-

iceable might be a department of mental hygiene under the direction of a psychiatrist, or the addition of an industrial psychologist to the health department staff, there are I guess few establishments as yet that feel required to go to the expense of having them. Yet it may be definitely said that with help misfits can straighten out. This is the essential point to recognize. Granniss tells us that any worker who has gone through the process of being hired and trained for a job represents a very definite investment to the firm, an investment which should be protected.

When we consider the mental health of a worker, there are numerous factors to view: The mental attitude of the individual worker, his relation with the foreman or supervisor, his wife's temper, his standard of living, his medical history, his manual dexterity and alertness, tastes, desires, ambitions, the working conditions, fatigue, mental and physical, staleness or "strain." These are matters that one trained in mental hygiene could devise methods of adjusting. Small incidents, such as a gruff word may lead a worker to believe that the whole company wishes him ill. If he be induced to express his grievance, putting it in words often causes him to realize its lack of importance. To sum up, as mental attitudes are causes of most employee maladjustments, more attention and time should be devoted to this phase of industrial personnel work.

How a Personnel Association is Organized; Its Control, Committees, Cooperation with Other Societies, the University and Chamber of Commerce, the Special Studies it Makes, and Mailing Service it Maintains for Its Members.

Philadelphia Personnel Association

By THE SECRETARY

Philadelphia Personnel Association

THE PHILADELPHIA Personnel Association was organized more than twenty years ago. During the important developing personnel period since then, it has played a prominent part in the development of personnel work in Philadelphia and its vicinity. The controlling organization of the Association consists of a President, three Vice-Presidents, Treasurer, Secretary and a Board of Directors including these officers and several additional Directors.

The President's responsibility is primarily that of "setting the pace" and coordinating the work of officers responsible for each phase of the Association's work. In order to avoid concentration of authority, the practice has been established during the last two years of having a differ-

ent officer responsible for each principal function.

Job Analysis of Association

In opening the Association's program in the Fall of 1936 a job analysis of its work was made. Then the functions were identified and a different officer assigned in charge of each. The six principal functions are:

1. Direction and coordination.
2. Programs.
3. Publicity.
4. Membership
5. Finance.
6. The secretarial function.

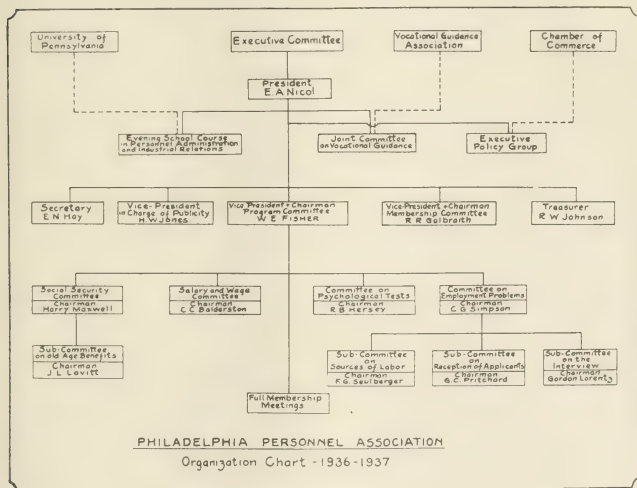
The President naturally assumes direction of the first of these six functions and the Treasurer and Secretary respectively of the last two. The other three were placed under the

direction of a Vice-President with a committee chosen by himself to assist him in the discharge of his duties. As a result of the job analysis, a statement of duties was prepared so that each officer knows exactly what his responsibilities are. This spreading of the responsibility has proven workable and satisfactory and is

Four Committees

It will be seen that the principal work of the Association lies in the committees. The principal committees are:

1. Social Security.
2. Salary and Wage.
3. Psychological Tests.
4. Employment Problems.



desirable in that it reduces the burden on one or two persons and permits more people to share in the management of the Association. Reference to Figure 1 shows the organization structure, as well as the agencies with which the Association is cooperating.

The total membership on these four committees is about forty out of a total Association membership of one hundred seventy-five individuals representing more than fifty companies. The work of these committees gives an opportunity for many members to

acquire valuable training and information on some subject of importance in their work.

Development of leadership is also facilitated by the opportunities for service as chairman of committees and sub-committees and service as officers of the Association. This opportunity for self-development is an important aim of the Association. In many Associations it is the practice to permit a few members to do most of the work; there are always such people. This often results in an undemocratic situation. The personal development of individual members who have opportunity to hold positions of responsibility is very noticeable.

It is difficult to find a topic and a speaker of such general appeal that most of the members will attend frequent general meetings. Their individual special interests, however, are taken care of by different group meetings. This is especially important as among the members there is a wide range of age and official responsibility, and meetings that would be suitable for one group would not appeal to another.

Coöperation with Other Groups

It has been the policy of the Association to coöperate as closely as possible with other groups whose interests are the same at some point. In pursuit of this ideal, joint meetings have been held with a number of associations. During the past year, for example, there was a joint meeting with the Safety Engineers' Club.

This came at a time when the Association members were interested in medical programs. A very excellent talk was given by Dr. A. W. Schoenleber, Medical Director of the Standard Oil Company of New Jersey which brought out a large number of members of both groups. Another joint meeting was held with the Philadelphia Chapter of the National Vocational Guidance Association. This was in the form of a panel discussion, "School and Industry Exploring Mutual Problems." The panel was made up of three members from each association under the chairmanship of a member agreeable to both groups. This, too, was a most successful meeting attended by a very large number. A second joint meeting of these two associations is now being planned.

Joint Course at University

Coöperation with the Wharton School of the University of Pennsylvania has been most profitable at many points. The course in "Personnel Administration and Industrial Relations" has been connected during the current winter under the auspices of the University of Pennsylvania in coöperation with the Personnel Association. This consisted of sixteen evening meetings of two hours each, about half of the instruction being given by members of the Personnel Association and the remainder by instructors of the University of Pennsylvania. This participation by personnel men has provided a more practical course than heretofore available.

Meetings with Chamber of Commerce

Another point of coöperation has been with the Philadelphia Chamber of Commerce Industrial Bureau. In conjunction with this organization "the Executive Policy group" has been organized to hear addresses and hold discussions on topics of major importance in the field of industrial relations. The membership of this group consists partly of leading members of the Personnel Association and partly of the chief executives of corporations who are members of the Chamber of Commerce. Meetings of this body are held at irregular intervals as suitable speakers may be available.

Research and Study

A special effort is made to bring to the attention of Association members current information dealing with personnel matters. Much of this material is the result of research and study on the part of members of the Association itself. An example is the study of personnel practices made two years ago under the direction of one of our active members who is on the staff of the University of Pennsylvania. This study was participated in by all members of the Association and gives a cross section of current personnel practices of all kinds. Whenever a member wants to see what others are doing on some point, he has access to this study of personnel practices and can secure, in addition, the names of members who follow any particular practice in which he is interested. In this way an exchange of ideas among members is facilitated.

Special Mailing Service

To get this printed material in the hands of members, we have what is called "Special Mailing Service." The following list shows some of the more interesting mailings of the past two years:

1. A study of personnel activities in forty-three companies in Philadelphia and vicinity conducted jointly by the Wharton School of the University of Pennsylvania and the Philadelphia Personnel Association.

2. Folio of information relating to unemployment compensation legislation (Prepared by the Social Security Committee of the Philadelphia Personnel Association).

3. Summary of provisions of the new Pennsylvania State Unemployment Act. Prepared by the Social Security Committee of the Philadelphia Personnel Association. This was the first interpretation of the new Act available to members.

4. Old age benefits under the Social Security Act. A statement prepared by members of the Personnel Association as a suggested memorandum to be furnished to all employees of member companies.

5. Recent developments in collective bargaining.—By W. E. Fisher, Assistant Professor of Industry, Wharton School of Finance and Commerce, University of Pennsylvania.

Not the least value of the Association to its members is in opportunities for fellowship and for acquaintance with each other's work. In a large city where business is scattered, this provides frequent opportunities for association among those doing similar work.

If Labor Organizations Become General
in Large Scale Industries, it Seems
Likely that This Pattern of Collective
Bargaining may Become Universal.

The Future of Collective Bargaining

By CHARLES S. SLOCOMBE
Personnel Research Federation

AT THE time of writing, it looks very much as if most of the employees in the larger companies in the mass production industries may be organized into recognized independent unions for collective bargaining purposes. Whether this is desirable or not, it seems to be the only way in which bloody revolutions of greater or less extent can be avoided.

Disregarding the sporadic temporary fleabite strikes of five and ten cent store girls, and of other employees in businesses having a high labor turnover, and looking beyond the type of "struggle" collective bargaining going on in the motor industry at present, what in the long run will this more or less permanent organization of employees lead to? What will be the benefits to employees, employers and the pub-

lic? How are the parties concerned likely to conduct themselves?

In order to obtain light on these questions we have studied a recent collective bargaining agreement between the railroad brotherhoods and the railroad companies. This is one of three railroad negotiations, the third of which is about to commence.

We have studied this industry because, in it collective bargaining by responsible union leadership has developed to a higher stage than in any other American industry; the management of the railroads, and their financial control, are in the hands of men who are as conservative as other industrialists, and cannot be accused of undue liberalism, and the industry is under Federal supervision in a way that is becoming more and more prevalent.

A Harvard professor has recently said that in America we may expect 200 years of State capitalism. The Federal supervision of the railroads seems to foreshadow the type of regulation to which all major industries may be subject if his forecast is accurate.

The Federal Coördinator

The particular collective bargain selected for study is that leading up to the so-called "coördination" or "job protection" agreement of 1936. This is selected because it exemplifies labor's attitude towards technological and managerial changes, resulting from engineering and other advances, leading to reductions in labor costs and operating expenses.

In 1933 the railroads were in a deep financial hole, out of which they thought to climb by borrowing money from the Reconstruction Finance Corporation, raising freight rates, and cutting wage rates. While these might have been alright as temporary measures, they did not appeal to Congress as likely to solve the problem, so there was passed the Emergency Railroad Transportation Act of 1933. This had as its main objects the encouragement of (a) the reduction of operating expenses by the elimination of wasteful competition and duplication of services and facilities, and the joint use of existing facilities by more than one carrier, (called coördinations), (b) financial reorganizations to reduce fixed charges. The Act was to remain in force for three years. (A "carrier" is a railroad, and "facilities" are

tracks, offices, terminals, repair shops, etc.)

It was thought that these methods if carried out would enable the railroads to increase their usefulness to the nation, to protect the rights of investors, and avoid the necessity of lowering the purchasing power of employees through reduced wages. This was a typical 1933 objective.

In order to carry out the provisions of the Act, there was to be appointed a Federal Coördinator of Transportation, whose job was to make studies of railroad operations, and order such coördinations of facilities as he thought were in the national interest. This was a typical 1933 method.

But obviously, in these days, such an Act cannot be passed without some provision protecting labor, for 80 per cent of the savings resulting from coördinations comes through reduction in labor force. So Section 7a of the Act provided that no employee who was in service in May 1933 should be laid off, nor should he be demoted or put in an "inferior position" as a result of the Act.

This provision seemed to block very effectively any coördinations during the three years of the Act. The Coördinator spent these years making his studies, and found that many coördinations could and should be carried out. These would result in the laying off of 150,000 men, and probably save the railroads half a billion dollars a year in operating expenses.

He Alarms the Industry

Both the Brotherhoods and the railroad managements were alarmed

at the idea of the Coördinator ordering these changes to be made, and late in 1935 saw that some action would be necessary in the 1936 Congress to prevent the extension of the Act for a further period of time.

So the Brotherhoods prepared a bill for introduction to Congress, which would afford them greater and more liberal protection of jobs, in the event of future coördinations, than the present Act did. Fortified with this bargaining weapon, they politely invited the Association of American Railroads to meet with them in conference to discuss the "elements involved" in coördinations.

The two sides met a month later, and characteristically the Labor Executives, as the Brotherhood Officers style themselves, did not hesitate to show their hand. (a) They did not want the Coördinator's office continued. Did the Railroads? (b) They wanted to arrange, by collective bargaining rather than by legislation, for adequate protection of employees whose jobs might be abolished or changed by voluntary coördinations effected by the railroads. Would the railroads agree to bargain with them?

First Steps in Bargaining

While the railroad executives were less open in expressing their views, it was evident that they welcomed aid in having the Coördinator's office discontinued, and that they preferred collective bargaining to legislative fiat. But there was a limit to the

price which they would pay for such labor coöperation. Here we see, as a first step, the negotiations put in the terms of a true bargain between two parties. Negotiating committees were appointed by both sides and met a month later.

The February sessions lasted for three days, during which there was an amicable exchange of proposals. The Brotherhoods brought in requests that were far more inclusive than anything before proposed. They even went so far as to ask that some men be granted life annuities if they lost their jobs. The railroads replied, pointing out the impossibility of most of these proposals. In turn they submitted proposals of their own. Their offers were not even so liberal as allowances granted by voluntary agreement in previous coördinations.

These were the usual trial statements, from which each side would have to advance, and served to measure the distances to be traversed. They were prepared ahead of time, and each party adopted an extreme. The Brotherhoods asked for unreasonably liberal allowances, and the railroads offered a few crumbs. Neither side could be blamed for adopting such tactics, for the whole negotiations were without precedent, and it was best to be on the safe side.

Such statements, like similar ones made by Lewis in demanding sole bargaining rights, and Sloan's statement that he would never negotiate with an outside union, make good newspaper headlines. But they bear

little relationship to the final agreement which may be arrived at, and as far as can be seen, their authors would be more surprised than anyone else, if they happened to get what they asked for at first.

However at the end of these first meetings, the railroads seemed to see in labor's proposals the possibility of negotiating an agreement, and asked that the introduction of legislation be deferred two weeks while the matter was studied further. This was agreed to.

Railroads Make Studies

During the next three weeks, in preparation for the next meeting, the railroads made a searching study into the whole subject of separation allowances. Included in this research were:

(1) An analysis of the Bill which the labor executives hoped to have passed by Congress (later, with amendments, known as the Wheeler-Crosser Bill).

(2) Precedents for the granting of allowances on American railroads to workers whose jobs had been changed as a result of coordinations. The first of these recorded was the granting of allowances for property losses incurred as a result of consolidations in the Kansas City Southern Railway in 1909.

(3) The provisions of the agreement entered into by the English railroads and the National Union of Railwaymen in 1921, when the English railways were consolidated into four systems.

(4) Canadian legislation of 1913 and 1919, dealing with this problem.

(5) Interstate Commerce Commission reports of investigations of the losses of employees, and destruction of property values resulting from past coordinations.

(6) Exhibits submitted by labor showing individual cases of employee hardship and loss.

(7) Legislation in South America providing for compulsory dismissal compensation.

(8) The cost to the railroads of granting labor's requests, in different sample mergers.

The cost to the railroads if their own proposals were accepted by labor. And a comparison of these costs.

These exhaustive studies, conducted with the aid of the Industrial Relations Section, Princeton University, were invaluable aids to the railroads in their understanding of the problem, and laid a firm base for framing proposals for submission to labor. All future labor negotiations of industry should be based on similar fact finding studies.

First Proposals

At the next meeting both the railroads and the Brotherhoods brought in formal proposals. (See following page.)

Here we see the second step in negotiations. After three months of preliminary approaches, negotiations and research, the position has so clarified that each side is able to set forth in writing what it wants, and how far, at the time, it is willing to go.

Railroads' proposals

1' The agreement should apply only when two or more carriers coordinate or consolidate their facilities.

(2) It should apply only to employees in service in May 1933.

(3) When a coordination is effected, and an employee's job is done away with, he can elect to remain on the waiting list without loss of his seniority rights, and without compensation, or he can resign and receive two weeks pay for every year of service (with a limit of one year's pay, for twenty-six years service).

(4) An employee shall not suffer a reduction in pay, unless there is no job at his rate of pay to which he may ask to be transferred in accordance with his seniority rights.

(5) An employee shall be paid all moving expenses for himself and his family.

(6) If he owns and occupies a home, and suffers loss on moving because of the merger, he shall be compensated for such loss by the railroads up to a limit of \$1000.

Avoid "Yes" or "No" Points

Examining these proposals we see that they deal with exactly similar points. We see also that, with the exception of the first one, they all leave room for compromise in which the gaps may be narrowed down to agreement during negotiations. The first one however, the so called "single carrier" issue is a point not subject to compromise. It is one on which one side or the other must give way.

It is unfortunate that there had to be this "Yes" or "No" point in the proposals, for it led to great trouble, and at one time caused the negotiations to break down completely. Only through the influence of the President of the United States were negotiations resumed.

Brotherhoods' counter-proposals

(1) The agreement should apply to all consolidations and mergers even those taking place within a single railroad.

(2) It should apply to all employees in service at the time of a merger.

(3) If an employee loses his job as a result of a merger he shall, until he is rehired, be paid two-thirds of his normal pay, or be given the option of resigning and accepting one full years' pay, or retiring at an adequate life annuity.

(4) No employee shall be reduced in pay, or otherwise be put in an "inferior position" as a result of a coordination.

(5) Employees shall be granted moving expenses for themselves and families.

(6) There shall be no limit to the compensation for loss on an occupied home suffered by an employee. The railroads shall pay it all.

It is an essential principle of collective bargaining that "Yes" or "No" items should be avoided in framing proposals. When during their course, negotiations drift into such phraseology, steps must immediately be taken to devise a new formula that reopens possibilities of compromise. This is one of the main services of mediators and conciliators. If "Yes" or "No" items cannot be avoided, as in these railroad negotiations, then the best thing to do with them is to defer their consideration till the end. When this is done, psychologically the parties feel that they will not throw away the advantages of the many points upon which they are agreed just because of one remaining difficulty. Often the side which has won most in

negotiations lets the other side have the decision on the "Yes" or "No" point as a consolation prize.

They Cause Deadlocks

Unfortunately, right after the above proposals were submitted by both sides, the chief labor negotiator was temporarily absent, and his substitute insisted on discussing the "Yes" or "No" point (No. 1) first. There followed four days of wrangling. Seeing that these tactics might delay negotiations, beyond the session of Congress, and in the face of labor fears that the Wheeler-Crosser Bill might not go through, the railroad negotiators offered a "standby" agreement, whereby they would not undertake coördinations for one year. During this time they hoped that negotiations could be concluded to the satisfaction of all concerned. But the chairman of the labor group made the inclusion of the word "voluntarily" in the standby agreement a "Yes" or "No" issue, and the conference adjourned in deadlock.

Then the President of the U. S. intervened, and another joint meeting was held three weeks later.

The Railroad Committee presented a list of carriers for which they were authorized to speak, and a list of "single carriers" for the labor group to inspect. They also introduced the standby agreement along the lines the labor group had seemed to want.

Politics in the Picture

But apparently in the meantime there had been a change in the

political situation. The desire of the employees for standby agreement was due to their finding out that apparently there was no chance of Congress passing legislation while negotiations were proceeding. So if the negotiations became dragged out beyond the term of Congress the employees would be left without protective legislation. They would also be left without their present bargaining weapon, which consisted of the threat of legislation hanging over the heads of the railroads. Labor apparently accused the railroads of bringing this Congressional state of affairs to pass, and suspected that the railroads had tried by this means to weaken their position in Congress. This also undoubtedly contributed to their sudden antagonism and the breakdown of negotiations.

After seeing the President, or at any rate being assured that the President had "fixed it," so that legislative action could proceed while negotiations were going on, the labor executives were no longer interested in the standby agreement and wanted to go ahead promptly with negotiations.

There is one vitally important point to note in connection with this stage of negotiations, when animosity, suspicion, and breakdown were present. That is that the first chairman of the labor executives committee, whose whole attitude had been one of attempting to avoid suspicions and to find points of agreement, was absent at this time. As soon as he returned to the committee,

the negotiations again proceeded along the lines of exploring for points of agreement. While there were other factors present leading to the difficulties, the influence of this leader might have smoothed them over.

The nature of the discussion, at the next meeting, indicated that the labor men thought the railroads were willing to make further concessions to avoid the continuance of legislation controlling their actions. So the conference got off the "single carrier" issue, which had caused such disagreement, and turned amicably to an attempt to compromise on how much dismissal compensation, etc., employees should get.

There is no need to go over in detail the long and weary sessions of the next six weeks, during which the parties approached closer and closer to final agreement. On May 1, five months after the first invitation to discuss the matter was issued, an agreement on points of principle was signed by the two parties.

What Does This Word Mean?

This looked like the successful termination of negotiations. But it wasn't. A labor representative said, "What does perquisites mean?" Another objected to the inclusion of the words "indirectly affected." A railroad man objected to the clause "shall be regarded as remaining in service." Another insisted that the word "immediate" should be inserted before the word "consequence." And so on.

For three solid weeks, this sort of

thing went on, day after day, until the delegates were so exhausted that they could not think of any more words to take out or put in.

While to the onlooker, this protracted playing with words seems childish, yet as a matter of fact it was as important a part of the negotiations as any other. For, many agreements in principle cause, rather than avoid strife, because they leave the details to be fought over later. When every conceivable implication and meaning of words, as they will apply in the operation of an agreement are thoroughly understood by both sides, a sound basis is laid for permanent harmony.

Terms of Final Agreement

When this word-baiting was over, a joint sub-committee including counsel for both sides, drew up the final agreement, and it was signed, (with the full understanding that the Coördinator's office and the Wheeler-Crosser Bill would both lapse). The main provisions were:

- (1) It should apply only to coordinations of the facilities of two or more carriers, as listed in the appendix to the agreement.
- (2) It should apply to all employees in service at the time of a merger.
- (3) An employee who loses his job as a result of a merger may be granted an allowance of 60% of his pay, until he is rehired, for a period varying from 6 to 60 months, depending upon his length of service, or he may resign, and receive a separation allowance of up to one year's pay depending upon his length of service.
- (4) An employee shall not suffer a reduction in pay as a result of a merger. If he goes into a lower paid job than the one he had before, he shall receive the difference as an allowance for a period up to five years.
- (5) An employee shall receive all moving expenses for himself and his family.

cc. Railroads will compensate employees living in their own homes in full, for losses incurred through depreciation of their property as a result of mergers, if they are required to move.

(7) Full provisions for machinery to settle disputes arising out of the agreement.

Bargaining Appraised

We may view this major example of collective bargaining from a variety of angles.

In the first place it was a successful solution, arrived at by employer employee negotiation and not by legislation, of an important social problem. The hardship to good stable property owning family raising citizens arising out of the increasing tendency of the railroads to coordinate transportation facilities was disheartening. Railway-men were consequently increasing their pressure against the coordinations inevitably necessary in the face of increasing bus competition. The problem was solved in a way that divided, as between employees and employers, in reasonable proportions the savings effected by coordinations.

During one of the most difficult phases of the negotiations the Railroad Committee prepared a statement, which in many ways, clarified the issues involved. It was a statement of principle which might be considered new, and of wider application,—to the effect that an employee has, by reason of his service within a company, an investment in his job, depending upon his length of service, and that management is willing to make a fair recompense to an employee whose "investment" is impaired by consolidations.

This statement while it did not

entirely eliminate the bilateral attitude of "So much is to be saved, how much of it can we grab from the other fellow," did place negotiations on a more logical basis.

As an example of patient search for bases of agreement in collective bargaining over a very big issue it stands very high in industrial history. Nevertheless, we see the clumsy and time consuming process that collective bargaining is, even at its best.

What shall we say about the fact that throughout negotiations the interest of the public was almost entirely neglected? No mention was made of the effect of abandoned or reduced communities with their stores, schools, etc., or of the advantages to the public of better transportation facilities, less time consumed in sending goods from place to place, or possible reduced transportation charges, or of the fact that the cost of employee job protection must come out of the pockets of the public.

Shall we acclaim labor for its broad viewpoint in these negotiations in preferring agreement to compulsory legislation, working hard to solve a social problem, and doing a pioneering job in showing its sense of responsibility for cooperative efficiency with management? Or shall we criticize its strategy in having the Emergency Transportation Act of 1933 and the Wheeler Crosser bill as bargaining weapons, and setting up a further restrictive legislative program for use in future negotiations?

Future Bargains

If labor organization becomes general in large scale industries, and

they also come under Federal control, it seems likely that this pattern of collective bargaining may become universal. It has the following essential elements:

(a) Labor, seeking some betterment of its working conditions, or protection of jobs in the face of engineering advances, will arm itself with friends in Congress, supplied with legislative measures of either a restrictive nature, or ones which would force industry to grant the betterment or protection desired.

(b) Industry will use the injunction and court suit method to show that it has power too.

(c) The stage being set, labor will approach industry with offers to work out collective bargaining agreements in place of legislation.

(d) Industry will agree, if the price is not too high, and if it can get some concession or aid from labor in return.

(e) Long and involved negotiations will follow, in which each side will get to understand the other's problems better, and learn how to cooperate. Agreement will generally result.

(f) Politics will influence negotiations throughout, sometimes by reason of actions by the parties concerned, and sometimes because of the interference of politicians.

(g) Negotiations will generally end in agreement, by which each party gains some advantage.

(h) For a long time it is doubtful if there will be much consideration for the public, as to how much costs to them may be raised, (as in steel's recent wage negotiations), or as to how service to them may be improved.

Perhaps in the second hundred years of the Harvard professor's 200 years of state capitalism, labor and industry will negotiate agreements that are primarily in the public interest.

A Practical Demonstration of How to Select an Advertising Assistant with Promotional Possibilities for the Sales Department.

Hiring an Advertising Assistant

By EDWARD N. HAY

The Pennsylvania Company,
Philadelphia, Pa.

I WAS consulted recently by a friend who has sought my advice previously and who therefore knew what I would do. He wanted to employ a young man for an advertising assistant who might also be one who would work well in the Sales Department at a later date, as assistant sales manager. This was a small company where the Sales Department is an unusually important part of the business.

I suggested that the employer cull from his original candidates not more than eight whom he thought most worthy of consideration. I entered the situation at this point.

From about two hundred candidates, six were selected and our first procedure was to read the application written by each man to review the record of his experience and educa-

tion. Our next step was to administer certain tests to the group. In the course of this test administration we were able to observe the men, although we did not interview them individually. During the testing we made some observations of their attitude and conduct. Following the completion of the tests each man was interviewed separately for no more than five minutes.

Our use of the tests for the same purpose as the interview and the reading of letters and records of experience; namely, each item constituted a "hurdle" over which the candidate must successfully pass. The winner did not necessarily need to be the one who had knocked down the fewest hurdles, but at least we would be able to choose by comparing performance in interview and tests.

The complete record of this series of steps is contained in the table.

Candidate No. 6 was first choice and No. 2 followed him closely. The third candidate was a possibility but Nos. 1, 4 and 5 were readily eliminated and might even have been eliminated in the earlier interview without the aid of any testing. No. 1 was palpably lacking in intelligence; No. 4 clearly disclosed personal disqualifications for a position involving any sales effort, mainly by

The O'Connor Vocabulary Test has been used by me a good deal as a general measure of breadth of interest and knowledge. Those who are familiar with it remember that O'Connor considers a high vocabulary as a concomitant of the successful man of affairs. The fact that successful men of affairs have large vocabularies may be analogous to the "patterns of interest" that Strong has identified for various occupations.

The use of a test of creative imagi-

Table of Rating and Test Results. First Choice, Candidate No. 6. Second Choice, Candidate No. 2

Candidate Number	Rating			Intelligence (I.Q. Otis S.A.)			Job Tests			
	From letter and Application	From Appearance	From Interview	Estimated		By Test	Minnesota Clerical Test		O'Connor Vocabulary	Creative Imagination
				From Appearance	From Interview		Numbers	Words		
1		C	Eliminated	100	100	75*	106	107	113	170
2	B (a trifle effusive)	A	B plus	125	118	119	74	148	134	150
3	B plus	B plus	B	118	118	117	148	173	115	213
4	C (effusive)	B	Eliminated	120	125	119	104	136	126	181
5	B plus		Eliminated	120	120	118	111	124	129	174
6	B plus	A	A	125	125	123	97	118	138	236

Rating scale: A, Superior; B, plus, Very Good; B, Good; C, Fair.

* Discrepancy here which a retest might reveal.

a markedly introverted personality. No. 5 was lacking in "polish," as also was No. 3, although otherwise a good candidate.

The reasons for using the particular tests were various. The Otis Self-Administering Test for Mental Ability was used because for those unused to taking mental tests it has no frightening mysteries, and because it is well standardized. The minimum level for this position was estimated, according to my experience, to be about 115 I.Q.

nation seemed desirable for a position calling for the preparation of advertising copy and leading to future promotion to a sales manager, even though the reliability of the available test is open to question. In using the Minnesota Clerical Test I thought that an advertising man should show reasonable facility in handling words and should, therefore, score fairly well on the word test. As this test was being administered, it could be seen that the applicants were slow on the Number section of the test. Be-

fore they started the Word section I made the following notation: "These men will be noticeably higher on names than on numbers." The results speak for themselves on this point for the scores on names were, with two exceptions, fairly high. All were higher than the scores on numbers.

Candidate No. 6 was an easy first choice. No. 2 was second.

The sequel to this episode will not be learned for five or ten years. The chief accountant which I helped my friend to choose a year ago, by the same methods, is proving to be an outstanding success.

Book Reviews

ORGANIZATION AND MANAGEMENT IN INDUSTRY AND BUSINESS. By William B. Cornell. The Ronald Press Company, New York 1936, 802 pages. Price \$4.50. Reviewed by N. G. Burleigh.

This book is a revision of an earlier volume by the same author entitled "Industrial Organization and Management." To those familiar with Mr. Cornell's first work it will be apparent that the revision is a real one. He has not followed the too-frequently used device of adding a new chapter at the end, for the purpose of covering the principal changes which have occurred in the field since the original manuscript was prepared.

He divides the book into three parts. The first twenty-four chapters, which constitute about seventy-five percent of the textual matter, are classified under "Organization and Operation of a Business Enterprise." The next six chapters are concerned with the elements of "Production Control and Time Study." The last three chapters are illustrations of plant lay-out and production dispatching systems.

The number of chapters is the same as in the original book, but the arrangement as well as the text itself has been improved. The number of illustrations has jumped from 132 to 173 which in itself adds to the interest and usefulness of the book. In addition many references to business situations and examples of various

company policies and practices amplify the author's discussions.

Early chapters deal almost too briefly with the principles of organization and management and the background of their development. In a series of chapters each headed "Analysis of the Industrial Problem" the author next seeks to establish the plant which is to be the home of the enterprise. As pertinent to this subject he gives consideration to the product; type of buildings and equipment and their lay-out; heating, lighting, and power facilities; and factors determining location. He avoids being too technical, although there may be a question as to whether this material, including a later chapter on power, might not have been condensed somewhat to give better balance to a general book on management. A single brief chapter on forms of business organization and methods of financing is almost an undertreatment of an important subject and tends to lend emphasis to the criticism made above.

The author is now ready to build the operating organization and in this section appear many of his best chapters. He introduces the subject by a discussion of the company organization, dividing it into its natural functions or departments and describing the work of each briefly. Then follow more detailed analyses of each of the departments referred

to, together with descriptions of various wage systems and budgets. These chapters are largely descriptive of the work of the various functions but contain many illustrations of procedure and methods with occasional statements of principles. On the whole they present a good general picture of the work of the different parts of the organization. One may disagree with the inclusion of some jobs in a given department or he may feel that unnecessary details are stressed and essential points understated or omitted, but the point of view is modern and shows an understanding of the complexities of modern business. Also it must be borne in mind that the different phases of management vary in degree of importance according to the peculiarities of the particular concern, so that what is a vital function in one case may be relatively unimportant in another. The traffic function which is disposed of in three pages under "Purchasing" is a case in point.

Part II dealing with production control is the most specialized section of the book. There are individual chapters on Tool Storage and Control, Production Control, Routing, Scheduling, Dispatching, and Time Study. One might be critical of these in that there is too little about production control as such and too much about the various elements of control. The student using these as text material is likely to find himself overcome by details and fail to visualize the problem as a whole. The factory executive, however, may find suggestions

of procedure or forms which may be adapted to his own business. This applies especially to Part III where dispatching methods of two well known companies are reproduced.

A feature of the book to be commended is a brief bibliography of well selected books, classified in accordance with the principal sub-divisions of the text.

Although the book treats of the organization as a whole, it deals more especially with the aspects of production and those activities most closely related to it. Accounting, finance, distribution, and general administration, although clearly analyzed and described, are less fully treated. The manuscript has been carefully prepared and is clearly presented in a simple style. The development of the subject matter is logical and methodical and well indicated by the use of numbered paragraphs and different styles of type face. The generous use of pictures, charts, illustrations of forms, and references to various company practices add to its value. It is distinctly a contribution to the literature on industrial management.

BOOKS ABOUT JOBS. By Willard E. Parker. American Library Association, Chicago, 402 pages. Price \$3.00.

This bibliography is the result of an endeavor to select, annotate and classify all worth-while occupational information which has been published in the United States during the last fifteen years.

Approximately 8,000 references are

listed under some 600 job classifications. Thousands of books, periodicals, monographs, brochures and leaflets were read, in order that the references on each job which seemed to be truly valuable might be chosen. Information on all fields of work and occupations for which the compiler was able to find useful and authentic material has been included. There are, however, many occupations for which no references have been tabulated. This is due, not to any desire to omit literature on any appropriate field of work, but because either no information was available about the job or the compiler was unable to find it.

Occupational information seems to fall mainly into six classes, not, of course, without considerable overlapping. These classes may be called historical, biographical, inspirational, analytical, technical and fictional. Historical references usually trace the origin and development of an occupation, and provide a background of the economic and social importance of the job. Biographies of leaders in occupations have long been recognized as being a very rich and interesting branch of literature for those seeking knowledge about those occupations. Inspirational books and articles seem to be the most questionable type of reading material to be used with students. They have, however, an exceedingly useful function in stimulating the imagination and enthusiasm of the individual who has not seriously considered certain occupations. The analytical

type of job information is, no doubt, the most practicable. References in this group usually describe the nature of the work, the income, the qualifications required, advantages and disadvantages, means of entry, numerical importance, etc. In short, they make a more or less complete job analysis. Technical references are usually of a textbook nature, delving into the intricacies of the theories and problems of the work. Advanced students and adults usually turn to this kind of reading matter for insight into the practical and theoretical phases of occupations which interest them. Material of this nature is becoming increasingly important as the employed millions are considering the training which they would like to acquire during their enforced idleness. Librarians are besieged by requests for factual, descriptive, educational data on jobs which represent distinct advancement for those applying. Thus, many unemployed bookkeepers, realizing that their field now seems to be overcrowded, are interested in preparing themselves to be accountants or statisticians, and wish to read authentic and well-written books on the subject.

All of these types of material, except the fictional, have been included in this occupational bibliography. An attempt has been made to collate as completely as possible all references which have real value.

This is the first book sponsored by the National Occupational Conference. In its inception, development and final publication it conforms with

the purposes and procedures adopted by the Conference.

FINDING YOURSELF IN YOUR WORK.

By Harry W. Hepner. D. Appleton-Century Co., New York, 297 pages. Price \$2.75.

This helpful book provides the reader with the actual tools for evaluating his capacities and aptitudes, recognizing his resources and handicaps, and planning a vocational program suited to his needs and abilities. The self-study procedure is described step by step in terms that anyone can understand. After using this book the reader may know the sort of work that best suits his individual personality.

Personality and vocational growth, the author declares, go hand in hand, each depending on the other. Hence the individual's vocational possibilities may be increased by redirecting his present motives. His best personality possibilities should be recognized and used in his career.

The book shows how, after obtaining an insight into his personality and abilities, the individual may apply this knowledge to the choice of a definite vocation and plan a suitable program to attain the growth he desires.

Interesting tests are provided to aid the student in his self-analysis. A feature of the volume is a series of fifty charts showing the interest patterns of experienced and successful workers in thirty vocations for men and twenty for women. By ranking his own individual pattern with these

standards of vocational interests, the reader will gain an helpful indication of the strength of his own interests, and thus simplify the choice of a career. To those who seek employment for the first time, to those who are dissatisfied with present positions, this book will be of assistance in enabling them to solve their own vocational and personality problems.

Personnel men, teachers, and parents will find this book helpful in dealing with advisees. It will also systematize and guide their own analyses of persons who are in need of personal counsel.

HOW TO FIND AND FOLLOW YOUR CAREER. By William J. Reilly. Harper & Bros., New York, 161 pages. Price \$1.75.

Mr. William J. Reilly is an advocate of the value of straight thinking in the solving of problems. Growing out of considerable experience with hundreds of people whom the author has helped to successful vocational adjustment through careful thinking, he here offers his counseling methods for wider use. And he sets forth in step-by-step detail the procedures which many have found of benefit in planning their careers and carrying out their plans.

The theme is presented in such a way as to be of equal help to the beginner in quest of a vocation and to the more experienced individual who finds himself unsatisfactorily placed in his employment.

The guidance offered is specific, de-

tailed and constructive, and has been tested by the author's own use.

CAREERS AFTER FORTY. By Walter B. Pitkin. McGraw Hill Book Co., New York, 273 pages. Price \$1.75.

Life begins at forty, Mr. Pitkin has argued in his earlier, popular book of that title, which has had a tremendous influence and contributed a new maxim to our contemporary expression. In this sequel to *Life Begins at Forty*, he tells specifically how life may begin, indeed how it has begun for many people who, either through necessity or because of dissatisfaction with their former occupations, have faced the problem of finding new careers at forty or later. The story is inspiring, but not because he makes it seem more optimistic than it really is. Actually, he shows, while economists have been bewailing the decreasing chances for employment of men and women of middle age in industry, changes have been occurring in other fields—and even in industry itself—which open up new opportunities for older men and women. Mr. Pitkin has sought out these opportunities through hundreds of interviews with people all over the United States, through consultations with personnel directors in all fields, business men, and others. He

now presents his findings with his usual common sense, sharp observations, originality of phrase, and infectious enthusiasm. Like *Life Begins at Forty*, *Careers after Forty* is a book not only for forty-year-olds, but for every man and woman who must earn a living—from sixteen to sixty!

ON GOING INTO BUSINESS. By John C. Baker, William D. Kennedy, and Deane W. Malott. McGraw Hill Book Co., New York, 233 pages. Price \$2.00.

Most books on entering business tell how to get a job; this one tells how to secure a position commensurate with one's abilities. It offers advice to the educated young man who is headed for a business career, discussing the practical and psychological problems met in finding employment and in earning promotion. The authors treat such topics as "The Trained Man," "Where Are the Best Openings?," "Approach to the Job," "Progress on the Job," "Big Business or Small," and "That Salary Question." The approach is through example, more than precept, and the book is based on the combined experience of the three authors in hundreds of actual cases. Because of vast recent changes in business, it antiquates older books on employment.



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